Access DB# 96920

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Daniel Davis Examiner #: 79061 Date: 6/18/03
Art Unit: 3731 Phone Number 30[illegible]-1232 Serial Number: 09/933722
Mail Box and Bldg/Room Location: _____ Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

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Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Medical Instrument

Inventors (please provide full names): _____

Earliest Priority Filing Date: March 28, 2002

For Sequence Searches Only *Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

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STAFF USE ONLY	Type of Search		Vendors and cost where applicable	
Searcher:	Walco	NA Sequence (#)		STN
Searcher Phone #:	305-8567	AA Sequence (#)		Dialog ✓
Searcher Location:	CP2-2C08	Structure (#)		Questel/Orbit
Date Searcher Picked Up:	6/18/03	Bibliographic	✓	Dr.Link
Date Completed:	6/19/03	Litigation		Lexis/Nexis
Searcher Prep & Review Time:		Fulltext	✓	Sequence Systems
Clerical Prep Time:		Patent Family		WWW/Internet ✓
Online Time:		Other		Other (specify)

PTO-1590 (8-01)

4:15-4:30 8:50-

AU1B
606/668

STIC Search Report
EIC 3700

STIC Database Tracking Number: 96920

TO: Daniel J Davis **Location: CP2-2D31** **Art Unit: 3731** **Thursday, June 19, 2003** **Case Serial Number: 09/937,722**	**From: Julie Walko** **Location: EIC 3700** **CP2-2C08** **Phone: 305-8587** **Julie.walko@uspto.gov**

Search Notes

Daniel:

Attached are the results to your request regarding medical instruments with a bioinert and biocompatible coating or material.

I found many citations that relate to medical devices (not necessarily those mentioned in the claims) that are biocompatible or have biocompatible coatings and are either bioinert (specified as such) or have one of the compounds you named as a coating or materials (e.g., aluminum oxide). Please note that zirconia is a synonym for zirconium oxide.

Also, there is a combination of green and yellow stickies because I ran out of green ones. There is no meaning to which is which.

If you have any questions or would like this search reworked in any way, please do not hesitate to contact me at the number or address listed above.

Biblio Patents

12/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

015341901 **Image available**
WPI Acc No: 2003-402839/200338
XRAM Acc No: C03-107105
XRPX Acc No: N03-321404

A device, moving liquid on microtitration plate to enhance mixing and reaction, includes piezoelectric drivers

Patent Assignee: ADVALYTIX AG (ADVA-N)
Inventor: GAUER C; SCRIBA J

Number of Countries: 100 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200318181	A1	20030306	WO 2002EP2340	A	20020304	200338	B
DE 10142789	C1	20030528	DE 1042789	A	20010831	200338	

Priority Applications (No Type Date): DE 1042789 A 20010831
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200318181	A1	G	51	B01F-013/00	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW

DE 10142789 C1 B01F-011/02

Abstract (Basic): WO 200318181 A1

NOVELTY - A device, moving liquid on microtitration plate to enhance mixing and reaction, includes piezoelectric drivers. The plate (15) has two main surfaces. An electrically-controlled driver (1) on an active, first main surface causes motion in a quantity of fluid contacting this surface. Electrical contacts are included for the driver.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a corresponding method of generating movement in small quantities of fluid;

(2) a cartridge for the driver;

(3) a reaction unit;

(4) a corresponding system inducing fluid movement.

USE - The device and method are useful in promoting movement in small quantities of fluid, e.g. in carrying out biomolecular reactions on microtitration plates, where e.g. hybridization of macromolecules and fluorescence detection take place.

ADVANTAGE - Simple, effective and thorough mixing of fluids, or the substances they contain, on or in a substrate material, is enabled. The device is cost effective and simple to handle. Protracted flow and diffusion mechanisms, which typically limit rates of reaction in microsystems, are avoided. Agitated, non-laminar flow is induced under electronic control. The invention is particularly relevant to microfluidic systems.

DESCRIPTION OF DRAWING(S) - A plan view of an implementation is shown.

electrically-controlled driver (1)

plate (15)

active main surface (16)
pp; 51 DwgNo 1a/9
Title Terms: DEVICE; MOVE; LIQUID; PLATE; ENHANCE; MIX; REACT; PIEZOELECTRIC; DRIVE
Derwent Class: A89; B04; D16; J04; Q68; U14; V06
International Patent Class (Main): B01F-011/02; B01F-013/00
International Patent Class (Additional): B01J-019/00; B01J-019/10; B01L-003/00; B81B-007/00; C12Q-001/68; G01N-033/50; H03H-003/08; H03H-009/145; H03H-009/25
File Segment: CPI; EPI; EngPI

12/5/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

015032262
WPI Acc No: 2003-092779/200308
XRAM Acc No: C03-023065
New biocompatible **platform comprises surface, polymerizable coating film and channel structure, useful in making biochips useful in biology, biotechnology or biomedicine, e.g. DNA sequencing or drug screening**
Patent Assignee: CHENG J (CHEN-I); HUANG M (HUAN-I); WANG X (WANG-I); WU L (WULL-I); YANG W (YANG-I); AVIVA BIOSCIENCES (AVIV-N)
Inventor: CHENG J; HUANG M; WANG X; WU L; YANG W
Number of Countries: 098 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200252045	A1	20020704	WO 2001US48919	A	20011213	200308	B
US 20020123134	A1	20020905	US 2000258281	P	20001226	200308	
			US 200122058	A	20011213		

Priority Applications (No Type Date): US 2000258281 P 20001226; US 200122058 A 20011213
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200252045	A1	E	82	C12Q-001/68	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW

US 20020123134 A1	C12M-001/34	Provisional application US 2000258281	

Abstract (Basic): WO 200252045 A1
NOVELTY - A **biocompatible** platform (I) comprises a surface, a coating film and a channel structure is new. The platform preferably comprises a microchip, and the coating film comprises a particle and defines in part the channel structure.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:
(1) making (M1) by contacting the surface of (I) with a polymerizable composition comprising unpolymerized polymer subunits and at least one polymerization initiator; and selectively polymerizing the polymerizable composition at loci to form another platform with a polymerized layer that defines at least in part at least one channel structure;
(2) a **biocompatible** platform (II) made by (M1);
(3) separating (M2) groups by:
(a) contacting the platform with the sample;
(b) moving the sample through channels on the second platform, such

that groups within the sample are separated; and
(c) optionally detecting at least one group;
(4) performing (M3) a bioassay or a chemical reaction by:
(a) contacting the platform with reagents;
(b) moving the reagents through channels on the second platform, such that the reagents are contacted and a bioassay or chemical reaction is performed; and
(c) optionally detecting at least one reactant or product of the bioassay or chemical reaction;
(5) performing (M4) high performance liquid chromatography, capillary electrophoresis or capillary electrochromatography by:
(1) injecting a sample into at least one channel structure on the platform;
(2) performing high performance liquid chromatography, capillary electrophoresis or capillary electrochromatography using at least one channel structure; and
(3) optionally detecting a group separated by high performance liquid chromatography, capillary electrophoresis or capillary electrochromatography; and
(6) cell separating (M5) or capturing a cell by:
(1) introducing a sample with cells into at least one channel structure on the platform;
(2) moving the sample or at least one of its component through at least one channel structure on the platform, such that cells within the sample are separated or captured; and
(3) optionally detecting the cells.
USE - The polymerizable coating films of the platform are useful in making chips, i.e. biochips that include channel structures. The biochips are useful in the field of laboratory or where microfluidics are important. The biochip technology can be applied in areas of biology, biotechnology and biomedicine including point mutation detection, DNA sequencing, gene expression, drug screening or clinical diagnosis. They can also be used in performing chemical reactions, biochemical reactions, detection of the reactions or sample separations.
ADVANTAGE - Prior art of manufacturing microchip uses plastic materials that are hydrophobic and not particularly **biocompatible** in nature. The contact surfaces made during these processes require additional modification so that they are appropriate for biological assays. The surface modification methods are limited which further limit the application and capabilities of the biochip. The new platform uses polymerizable coating films that are designed to be active and **biocompatible** .
pp; 82 DwgNo 0/7
Title Terms: NEW; **BIOCOMPATIBLE** ; PLATFORM; COMPRISE; SURFACE; POLYMERISE; COATING; FILM; CHANNEL; STRUCTURE; USEFUL; USEFUL; BIOLOGICAL; DNA; SEQUENCE; DRUG; SCREEN
Derwent Class: A89; B04; D16; J04
International Patent Class (Main): C12M-001/34; C12Q-001/68
International Patent Class (Additional): G01N-033/53; G01N-033/542
File Segment: CPI

12/5/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014351313 **Image available**
WPI Acc No: 2002-172016/200222
Related WPI Acc No: 2002-188616; 2002-227036; 2002-315242; 2002-575105
XRAM Acc No: C02-053323

XRPX Acc No: N02-130725

Ceramic material production by coalescence, used for medical and non-medical devices, involves filling ceramic material in pre-compacting mold followed by compressing material using striking unit

Patent Assignee: CK MANAGEMENT UB AB (CKMA-N)
Inventor: JIANGUO L; OLSSON K

Number of Countries: 096 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200208478	A1	20020131	WO 2001SE1673	A	20010725	200222	B
AU 200182738	A	20020205	AU 200182738	A	20010725	200236	
NO 200300387	A	20030321	WO 2001SE1673	A	20010725	200328	
			NO 2003387	A	20030124		

Priority Applications (No Type Date): SE 20002770 A 20000725
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200208478	A1	E	115	C22C-001/04	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200182738	A	C22C-001/04	Based on patent WO 200208478
NO 200300387	A	C04B-035/622	

Abstract (Basic): WO 200208478 A1

NOVELTY - The method involves filling a pre-compacting mold with ceramic material (1) in form of powder, pellets or grains. The material is pre-compacted at least once and compressed in a compression mold by at least one stroke. A striking unit (2) emits sufficient kinetic energy to form the material when striking it in mold, causing coalescence of the material.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for the product obtained by ceramic material production.

USE - For medical or non-medical devices, like medical implants such as skeletal or tooth prosthesis (all claimed), and non- **medical** applications like **tools** , insulator applications, crucibles, spray nozzles, tubes, cutting edges, joining rings, ball bearings and engine portions.

ADVANTAGE - Production efficiency of products at low cost is enabled. A very dense material is obtained when the ceramic material is produced by coalescence. The transmitted kinetic energy enables the particles to soften, deform and melt.

The inter-particular melting enables the particles to resolidify together and dense material is obtained. The ceramic material is medically acceptable, **biocompatible** , haemocompatible, mechanically durable and is produced in one or two steps without the need of mechanical working.

Large materials are produced in one piece. The process is performed independent of electrical charges or surface tension of the powder particles.

Surface tension of the material produced can be controlled. The surface of the material is very smooth, hard and dense. The hard surface enables the material to have excellent mechanical properties such as high abrasion resistance, scratch resistance and corrosion resistance.

The product has less pores and high strength. The process does not require use of additives, vacuum or inert gas. Extremely high purity of the product is enabled.

DESCRIPTION OF DRAWING(S) - The figure shows cross-sectional view of ceramic material production.
Ceramic material (1)
Striking unit (2)
pp; 115 DwgNo 1/44
Title Terms: CERAMIC; MATERIAL; PRODUCE; COALESCE; MEDICAL; NON; MEDICAL; DEVICE; FILL; CERAMIC; MATERIAL; PRE; COMPACT; MOULD; FOLLOW; COMPRESS; MATERIAL; STRIKE; UNIT
Derwent Class: L02; P52; P53
International Patent Class (Main): C04B-035/622; C22C-001/04
International Patent Class (Additional): B21J-005/00; B22F-003/02; C22C-029/00
File Segment: CPI; EngPI

12/5/4 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014180233
WPI Acc No: 2002-000930/200201
XRAM Acc No: C02-000468
XRPX Acc No: N02-000681
Intravascular catheter, includes a tubular body made from a composition including a ceramic
Patent Assignee: NEICH MEDICAL LTD (NEIC-N); NEICH MEDICAL CO LTD (NEIC-N)
Inventor: JIMENEZ O
Number of Countries: 027 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 1136085	A2	20010926	EP 2001106752	A	20010317	200201	B
US 6520952	B1	20030218	US 2000533492	A	20000323	200317	

Priority Applications (No Type Date): US 2000533492 A 20000323
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 1136085	A2	E	4	A61L-029/00	
US 6520952	B1			A61M-029/00	

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

Abstract (Basic): EP 1136085 A2
NOVELTY - A catheter includes a tubular body made from a composition including a ceramic.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method for making a tubular body for use as a catheter which includes: (a) blending a ceramic with a plastic material; and (b) extruding the blended materials into a tubular body.
USE - Improved composition for intravascular catheters, which is used to extrude the body of a catheter or conduit to be introduced into a body, such as interventional guiding catheters, coronary catheters, drainage catheters, chemotherapy delivery catheters, radiology catheters or neuroradiology catheters, as well as the insulation or protective cover of electrical conduits, such as temporary leads for stimulating the heart or other organs. The composition may also be used to provide conduits for **surgical instruments** used in keyhole operations such as cholisystectomy and laparoscopic tubal ligation, or for biopsy forceps.
pp; 4 DwgNo 0/0
Title Terms: INTRAVASCULAR; CATHETER; TUBE; BODY; MADE; COMPOSITION; CERAMIC

Derwent Class: A96; L02; P34
International Patent Class (Main): A61L-029/00; A61M-029/00
File Segment: CPI; EngPI

12/5/5 (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013871541
WPI Acc No: 2001-355753/200137
XRAM Acc No: C01-110365
XRPX Acc No: N01-258463

Manufacture of bone graft materials for use in osteogenesis and morphogenesis, involves collecting sponge bone from animal bone, removing lipid and organic material and sterilizing sponge bone by irradiation

Patent Assignee: OSCOTEC INC (OSCO-N); KIM H (KIMH-I); KIM J (KIMJ-I); KIM J K (KIMJ-I); KIM S (KIMS-I); KO S (KOSS-I); SHIN D (SHIN-I); YIM C (YIMC-I); YIM S (YIMS-I); YU Y (YUYY-I); KIM H G (KIMH-I); KIM J G (KIMJ-I); KIM J Y (KIMJ-I); KIM S W (KIMS-I); KOH S I (KOHS-I); LIM C J (LIMC-I); LIM S B (LIMS-I); OCT INC (OCTO-N); SHIN D R (SHIN-I); YOO Y M (YOOY-I)
Inventor: KIM J K; KIM J G; KIM H G; KIM J Y; KIM S W; KO S Y; LEE S C; SHIN D R; YIM C J; YIM S B; YU Y M
Number of Countries: 094 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200137891	A1	20010531	WO 2000KR1357	A	20001125	200137 B
AU 200118990	A	20010604	AU 200118990	A	20001125	200153
KR 2001048219	A	20010615	KR 9952810	A	19991125	200170
KR 331608	B	20020409	KR 9952810	A	19991125	200267

Priority Applications (No Type Date): KR 9952810 A 19991125
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200137891	A1	E	47	A61L-027/00	
AU 200118990	A			A61L-027/00	Based on patent WO 200137891
KR 2001048219	A			A61L-027/00	
KR 331608	B			A61L-027/00	Previous Publ. patent KR 2001048219

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

Abstract (Basic): WO 200137891 A1

NOVELTY - Bone graft materials are manufactured using animal bone by collecting sponge bone, removing lipid and organic material and sterilizing the sponge bone by irradiation.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for bone graft materials.

USE - For use in osteogenesis and bone morphogenesis.

ADVANTAGE - The bone graft material prepared from animal bone, is free from immunogenesity and acute and sub-acute toxicity to tissue which maintains its original **crystal** structure and promotes **biocompatible** osteogenesis.

pp; 47 DwgNo 0/2

Title Terms: MANUFACTURE; BONE; GRAFT; MATERIAL; OSSIFY; MORPHOGENETIC; COLLECT; SPONGE; BONE; ANIMAL; BONE; REMOVE; LIPID; ORGANIC; MATERIAL; STERILE; SPONGE; BONE; IRRADIATE

Derwent Class: D22; P34
International Patent Class (Main): A61L-027/00
File Segment: CPI; EngPI

12/5/6 (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013500730
WPI Acc No: 2000-672671/200065
XRAM Acc No: C00-203763
XRPX Acc No: N00-498710
Medical **or** surgical instrument , **useful in orthopaedics, bone surgery and 'roboting' or imaging operations, is made of or is coated with** biocompatible bio - inert **material**
Patent Assignee: CERAMTEC AG (CERA-N); CERAMTEC INNOVATIVE CERAMIC ENG AG (CERA-N)
Inventor: BURGER W; FRANKE R; FRIPAN M; RICHTER H
Number of Countries: 091 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200061517	A1	20001019	WO 2000EP3240	A	20000411	200065	B
DE 10017952	A1	20001214	DE 1017952	A	20000411	200067	
AU 200041174	A	20001114	AU 200041174	A	20000411	200108	
EP 1171401	A1	20020116	EP 2000920688	A	20000411	200207	
			WO 2000EP3240	A	20000411		

Same date & inventors, different title

Priority Applications (No Type Date): DE 1016149 A 19990411
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200061517	A1	G	16	C04B-035/01	
DE 10017952	A1			A61L-031/08	
AU 200041174	A			C04B-035/01	Based on patent WO 200061517
EP 1171401	A1	G		C04B-035/01	Based on patent WO 200061517

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

Abstract (Basic): WO 200061517 A1
NOVELTY - **Medical / surgical instrument** , is made of or is coated with **biocompatible bio - inert** material.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(i) use of a **biocompatible bio - inert** material for production or coating of **medical / surgical instruments** ;
(ii) use of a tool of **biocompatible bio - inert** material in surgery, for machining bone or for preventing osteolytic debris particles;
(iii) a tool of **biocompatible bio - inert** material for use as a **medical / surgical instrument** ; and
(iv) use of a tool of **biocompatible bio - inert** material in 'roboting' or imaging.
USE - The instrument is used as e.g., a **scalpel** , scissors, **saw** , **drill** , tap, **centering tool** , **drill** sleeve or stencil useful in

orthopaedics or bone surgery, e.g. implant or prosthetic surgery, and in modern 'roboting' or imaging operation techniques.

ADVANTAGE - The instrument avoids the creation of iron debris and consequent 'particle-disease' in periprosthetic tissue, has extremely high wear resistance and mechanical properties, has better cutting characteristics than conventional instruments, avoids the fatty tissue wettability problems of conventional instruments, can be sterilized without problems for repeated reuse and exhibits a sharp contour in nuclear spin tomography.

pp; 16 DwgNo 0/3

Title Terms: MEDICAL; SURGICAL; INSTRUMENT; USEFUL; ORTHOPAEDIC; BONE; SURGICAL; IMAGE; OPERATE; MADE; COATING; **BIOCOMPATIBLE** ; BIO; INERT; MATERIAL

Derwent Class: L02; P31; P34

International Patent Class (Main): A61L-031/08; C04B-035/01

International Patent Class (Additional): A61B-017/16; A61B-017/32; A61B-017/56; A61L-031/02

File Segment: CPI; EngPI

12/5/7 (Item 7 from file: 350)

DIALOG(R)File 350:Derwent WPIX

013270036

WPI Acc No: 2000-441942/200038

XRAM Acc No: C00-134184

XRPX Acc No: N00-329864

Surface modification of polymer, for medical implants, comprises treating surface with plasma gas

Patent Assignee: UNIV CALIFORNIA (REGC)

Inventor: KAPLAN S L; KLAPPERICH C M; KOMVOPOULOS K; PRUITT L A

Number of Countries: 090 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200032248	A1	20000608	WO 99US28209	A	19991129	200038	B
AU 200019261	A	20000619	AU 200019261	A	19991129	200044	
US 6379741	B1	20020430	US 98110188	P	19981130	200235	
			US 99450815	A	19991129		
US 20030040807	A1	20030227	US 98110188	P	19981130	200318	
			US 99450815	A	19991129		
			US 200275813	A	20020212		

Priority Applications (No Type Date): US 98110188 P 19981130; US 99450815 A 19991129; US 200275813 A 20020212

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200032248	A1	E	33	A61L-027/00	

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW

AU 200019261	A	A61L-027/00	Based on patent WO 200032248
US 6379741	B1	A61L-027/00	Provisional application US 98110188
US 20030040807	A1	A61F-002/28	Provisional application US 98110188
			Div ex application US 99450815
			Div ex patent US 6379741

Abstract (Basic): WO 200032248 A1

NOVELTY - Enhancing characteristics of a polymeric component (1) in a prosthetic implant, comprises contacting the surface (2) with a substance in a gaseous plasma state at a sufficient power density (3) and exposure time for conversion of polymer in (1) either by crosslinking of (1) at the surface or bonding of the substance to (1).

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for an articulate prosthetic implant which comprises a polymeric component (1) having a surface (2) in sliding contact with an additional component of the implant and a bulk substrate beneath (2). (1) comprises of a biologically compatible organic polymer with a crosslinking profile normal to (2). The profile is defined by a crosslinking density at (2) that is sufficiently great to inhibit **crystalline** lamella formation at (2) and a crosslinking density in the bulk substrate that is lower than that of (2).

USE - Used for the manufacture of medical devices, especially artificial joints, bio- **instruments** and other **medical** implants.

ADVANTAGE - Improves wear resistance of the implant, reduces the tendency towards the release of particular debris, lessens friction between (1) and an adjacent component, increases hydrophobic or hydrophilic character of (2), modifies the chemistry of the surface by attaching functional groups, sterilizing or roughening the surface or making it more **biocompatible** . The method additionally reduces the presence of loose particles, the loosening of joints and the re-adsorption of bone.

pp; 33 DwgNo 0/6

Title Terms: SURFACE; MODIFIED; POLYMER; MEDICAL; IMPLANT; COMPRISE; TREAT; SURFACE; PLASMA; GAS

Derwent Class: A17; A96; D22; P32; P34; X14

International Patent Class (Main): A61F-002/28; A61L-027/00

International Patent Class (Additional): A61F-002/30; C08F-002/46; C08J-007/18; H05H-001/00

File Segment: CPI; EPI; EngPI

12/5/8 (Item 8 from file: 350)

DIALOG(R)File 350:Derwent WPIX

012976146

WPI Acc No: 2000-147995/200014

XRAM Acc No: C00-046472

Smooth, adherent, abrasion-resistant, repellent fluoropolymer coatings on implants, prostheses or medical instruments **, obtained by pulsed laser deposition**

Patent Assignee: HEITZ J (HEIT-I)

Inventor: ARENHOLZ E; BAEUERLE D; HEITZ J

Number of Countries: 021 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
AT 9802119	A	20000115	AT 982119	A	19981221	200014	B
WO 200037122	A1	20000629	WO 99EP10229	A	19991221	200036	
AT 406756	B	20000715	AT 982119	A	19981221	200041	
EP 1140238	A1	20011010	EP 99969222	A	19991221	200167	
			WO 99EP10229	A	19991221		
EP 1140238	B1	20021106	EP 99969222	A	19991221	200281	
			WO 99EP10229	A	19991221		
DE 59903359	G	20021212	DE 503359	A	19991221	200282	
			EP 99969222	A	19991221		
			WO 99EP10229	A	19991221		

Priority Applications (No Type Date): AT 982119 A 19981221
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
AT 9802119	A		9	B32B-027/32	
WO 200037122	A1	G		A61L-027/34	
Designated States (National): JP US					
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
AT 406756	B			B32B-027/32	Previous Publ. patent AT 9802119
EP 1140238	A1	G		A61L-027/34	Based on patent WO 200037122
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					
EP 1140238	B1	G		A61L-027/34	Based on patent WO 200037122
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					
DE 59903359	G			A61L-027/34	Based on patent EP 1140238 Based on patent WO 200037122

Abstract (Basic): AT 9802119 A

NOVELTY - New, thin (less than 200 mu m thick), repellent fluoropolymer (I) coatings on implants, prostheses and medical **instruments** are obtained by pulsed laser deposition from fluorine-containing polymers (II). The average polymer chain length of (I) is not less than half of that of (II) and the crosslinking degree of (I) is not more than twice that of (II). DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for the preparation of the coatings.

USE - For coating implants or prostheses (e.g. artificial blood vessels, stents or heart valves) or **medical instruments** (e.g. **surgical** needles), to provide smooth, non-stick, **biocompatible** , non-thrombogenic surfaces. The coatings may also be used to release drugs such as antithrombotic, antibiotic or antibacterial agents.

ADVANTAGE - The coatings have good adhesion and abrasion resistance (claimed). They are smooth, coherent and transparent; have infrared spectrum and dielectric and electric properties comparable with those of commercial PTFE; and are in the form of highly **cryst**alline films.

Dwg.0/0

Title Terms: SMOOTH; ADHERE; ABRASION; RESISTANCE; REPEL; COATING; IMPLANT; PROSTHESIS; MEDICAL; INSTRUMENT; OBTAIN; PULSE; LASER; DEPOSIT
Derwent Class: A14; A96; B07; D22; P34; P73
International Patent Class (Main): A61L-027/34; B32B-027/32
International Patent Class (Additional): C08J-007/04
File Segment: CPI; EngPI

12/5/9 (Item 9 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012736710 **Image available**
WPI Acc No: 1999-542827/199946
XRPX Acc No: N99-402582

Surgical **pouch** instrument **for removing material during endoscopic surgery**

Patent Assignee: ETHICON INC (ETHI)
Inventor: ROUSSEAU R A
Number of Countries: 027 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 947166	A2	19991006	EP 99302432	A	19990329	199946	B
US 5971995	A	19991026	US 9850300	A	19980330	199952	
JP 11309150	A	19991109	JP 9986982	A	19990329	200004	

EP 947166 B1 20030514 EP 99302432 A 19990329 200333

Priority Applications (No Type Date): US 9850300 A 19980330
Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
EP 947166 A2 E 14 A61B-017/00
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
US 5971995 A A61B-017/24
JP 11309150 A 10 A61B-017/00
EP 947166 B1 E A61B-017/00
Designated States (Regional): DE FR GB IT

Abstract (Basic): EP 947166 A2
NOVELTY - The pouch (14) is supported on folding blades (16a,b) and contains a suture (20). The blades are attached to a push/pull rod (58), the inside push rod (56) being inside the outer tube (12). A thumb ring (42) is attached to the push/pull rod. A grip (24) is attached to the outer tube.
DETAILED DESCRIPTION - Initially the pouch and blades are folded inside the pusher rod. When the thumb ring is pushed in, the blades and pouch are pushed out of the outer tube and open out. When the thumb ring is retracted, the pusher rod stays out, and the blades are retracted out of the pouch and into the pusher rod. The suture ties the pouch and the instrument can be withdrawn with or without the pouch.
USE - For receiving, retaining and removing matter during minimally invasive surgery.
ADVANTAGE - Shorter stroke required to deploy pouch. Pouch readily detachable from support rim while maintaining rigidity of the rim. Pouch does not impede retraction.
DESCRIPTION OF DRAWING(S) - The diagram shows a perspective view of the instrument.
Introducer tube (12)
Surgical pouch (14)
Support blades (16a,b)
Cinching suture (20)
Grip (24)
Thumb ring (42)
Hollow pusher tube (56)
Push/pull rod (58)
pp; 14 DwgNo 1/14
Title Terms: SURGICAL; POUCH; INSTRUMENT; REMOVE; MATERIAL; ENDOSCOPE; SURGICAL
Derwent Class: P31
International Patent Class (Main): A61B-017/00; A61B-017/24
International Patent Class (Additional): A61B-017/26
File Segment: EngPI

12/5/10 (Item 10 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012337845 **Image available**
WPI Acc No: 1999-143952/199913
XRAM Acc No: C99-042231
New soluble polymeric thiosulphate(s) - used for ultra-thin coating of metals to inhibit corrosion, improve biocompatibility **of medical devices and improve coupling of proteins, antibodies, antigens, etc.**
Patent Assignee: UNIV KARLSRUHE TH (UYKA-N); UNIV KARLSRUHE (UYKA-N)
Inventor: CHOI S W; PETRI D F; WENZ G

Number of Countries: 022 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 19735368	A1	19990218	DE 1035368	A	19970814	199913	B
WO 9909088	A2	19990225	WO 98DE2314	A	19980811	199915	
AU 9895301	A	19990308	AU 9895301	A	19980811	199929	
EP 932637	A2	19990804	EP 98948770	A	19980811	199935	
			WO 98DE2314	A	19980811		
US 6245579	B1	20010612	WO 98DE2314	A	19980811	200135	
			US 99284351	A	19990609		

Priority Applications (No Type Date): DE 1035368 A 19970814
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 19735368	A1		17	C08B-011/10	
WO 9909088	A2	G		C08G-075/00	
Designated States (National): AU CA JP US					
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
AU 9895301	A			C08G-075/00	Based on patent WO 9909088
EP 932637	A2	G		C08G-075/00	Based on patent WO 9909088
Designated States (Regional): DE ES FR GB IT					
US 6245579	B1			G01N-033/548	Based on patent WO 9909088

Abstract (Basic): DE 19735368 A

A soluble polymeric thiosulphate with structural units of formula (I) and/or (II) is claimed. In the formulae, AK = an anhydro-carbohydrate unit; R1 = H, 1-30C alkyl, 1-30C alkanoyl, 2-30C alkyleneoxyalkyl, 2-30C alkyleneoxoalkyl, 2-30C alkenyl, 2-30C alkenoyl, 2-30C alkynyl, 5-30C cycloalkyl, or 5-30C aryl or 5-30C aryloyl (which may both be substituted and/or contain one or more heteroatoms); R2 = a bivalent spacer selected from 1-30C alkylene, 1-30C hydroxyalkylene, 1-30C oxoalkylene, 2-30C alkyleneoxoalkylene, 2-30C alkyleneoxyalkylene, 2-30C hydroxyalkyleneoxyalkylene, 2-30C alkyleneoxyhydroxyalkylene, 2-10C alkenyl, 2-30C alkynyl, 5-30C cycloalkylene or 5-30C arylene (which may contain one or more heteroatoms); all groups except the 2-10C alkenyl and 2-30C alkynyl groups are optionally substituted; Y = nitrate, aminodeoxy, optionally substituted amino, carboxy- or hydroxyalkyl, sulphate, sulphonate, carbonate or xanthogenate; x1, x2, x3 = 0-3, provided that the sum of x1 - x3 is less than or equal to 3 and that x3 is not 0 throughout the length of the polymer chain; R1 and R2 are bound to an O atom on the carbohydrate unit; the degree of polymerisation is 1-10,000 and the coupling of the anhydro-carbohydrate groups is linear, cyclic, branched or crosslinked.

Also claimed are colloids comprising one or more of the polymeric thiosulphates and a colloidal solution of a metal selected from gold, silver, platinum, palladium, mercury or copper.

USE - For ultra-thin coating of alloys, precious and semi-precious metals (claimed), in which the metal is dipped into an aqueous and/or alcoholic solution of the polymeric thiosulphates. Can be used to inhibit corrosion and oxidation; to improve the water resistance of metals; to improve the adhesion of coatings and adhesives to metals; to coat metals e.g. nickel to prevent contact allergy; as a coating for **surgical instruments** , endo-prostheses and stents to improve **biocompatibility** ; to improve the coupling of proteins, antibodies, antigens, pharmaceutical substances or radioactive isotopes to the metal surfaces and colloids; to immobilise metal colloid particles to solid surfaces; and as a base coating to improve the adhesion of proteins such as antibodies in diagnostics.

ADVANTAGE - The polymers do not have an unpleasant smell, have low

toxicity and are more soluble in aqueous media than known metal coatings. Unlike known non-polymeric alkylthio derivatives (J. Am. Chem. Soc. 1990, 112, 558-569), they are amorphous rather than **crystalline** , and form hydrophilic, dense layers only a few nanometres thick, but which nonetheless have improved mechanical and chemical stability. Such stability allows the coating of any kind of surface, including the inner walls of tubes. Because of their solubility in water, the polymers of the invention are also simpler to apply, more economical and less damaging to the environment. They are produced simply and in high yields, with no S-S cross-linking.

Dwg.0/9

Title Terms: NEW; SOLUBLE; POLYMERISE; THIOSULPHATE; ULTRA; THIN; COATING; METAL; INHIBIT; CORROSION; IMPROVE; **BIOCOMPATIBLE** ; MEDICAL; DEVICE; IMPROVE; COUPLE; PROTEIN; ANTIBODY; ANTIGEN
Derwent Class: A11; A82; A96; B04; D16; G02; K08; M14
International Patent Class (Main): C08B-011/10; C08G-075/00; G01N-033/548
International Patent Class (Additional): B01J-013/00; C07K-001/04; C07K-017/12; C08B-031/12; C08B-033/04; C08B-035/04; C08B-037/00; C08L-001/08; C08L-005/00; C09D-101/26; C09D-103/08; C09D-105/00; C12N-011/00; G01N-033/553
File Segment: CPI

12/5/11 (Item 11 from file: 350)

011406328 **Image available**
WPI Acc No: 1997-384235/199735
Related WPI Acc No: 1991-031081; 1991-209718; 1993-251299; 1994-047949; 1994-185174; 1994-242347; 1996-049361; 1996-150617; 1996-383557; 1996-411456; 1997-153157; 1997-191772; 1997-280170; 1997-297241; 1997-384559; 1997-502220
XRAM Acc No: C97-123119
XRPX Acc No: N97-319915

Catheters coated with zirconium oxide **or nitride - providing enhanced thrombogenicity,** biocompatibility , **blood compatibility, corrosion resistance, durability**

Patent Assignee: SMITH & NEPHEW INC (SMIN)
Inventor: DAVIDSON J A
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5647858	A	19970715	US 89385285	A	19890725	199735 B
			US 90557173	A	19900723	
			US 92830720	A	19920204	
			US 92919932	A	19920727	
			US 93112587	A	19930826	
			US 95469688	A	19950606	

Priority Applications (No Type Date): US 93112587 A 19930826; US 89385285 A 19890725; US 90557173 A 19900723; US 92830720 A 19920204; US 92919932 A 19920727; US 95469688 A 19950606
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5647858	A		7	A61M-005/00	CIP of application US 89385285
					CIP of application US 90557173
					CIP of application US 92830720
					CIP of application US 92919932
					Div ex application US 93112587
					CIP of patent US 5037438

CIP of patent US 5152794
CIP of patent US 5258022
CIP of patent US 5282850
Div ex patent US 5469359

Abstract (Basic): US 5647858 A

A catheter comprises a body through which a bore extends for insertion of **surgical instruments** , the body comprising: (a) an underlying substrate (a solid tube or coiled wire) of low elastic modulus metal composition; surface-coated with (b) a corrosion resistant, **biocompatible** , haemocompatible, durable, stable coating selected from **zirconium oxides** ranging in colour from blue to black, and zirconium nitrides, ranging in colour from yellow to orange.

The coating is 0.1-20 mu m thick. The substrate is zirconium or a zirconium-containing alloy. The coating may be overlaid with a silver doped or boronated overlay coating to improve wear resistance; or a coating of amorphous diamond-like carbon, cubic zirconia or white tetragonal zirconia.

USE - The coating can provide enhanced thrombogenicity, **biocompatibility** , blood compatibility, corrosion resistance, friction or microfretting resistance, durability or electrical insulation. The oxide- or nitride-coated surfaces may be coated with other compositions to further enhance **biocompatibility** and performance, e.g. antibiotics or anticoagulants (claimed).

Dwg.1/1

Title Terms: CATHETER; COATING; ZIRCONIUM; OXIDE; NITRIDE; ENHANCE; **BIOCOMPATIBLE** ; BLOOD; COMPATIBLE; CORROSION; RESISTANCE; DURABLE
Derwent Class: B07; P34
International Patent Class (Main): A61M-005/00
File Segment: CPI; EngPI

12/5/12 (Item 12 from file: 350)

010653663 **Image available**
WPI Acc No: 1996-150617/199615
Related WPI Acc No: 1991-031081; 1991-209718; 1993-251299; 1994-047949; 1994-185174; 1994-242347; 1996-049361; 1996-383557; 1996-411456; 1997-153157; 1997-191772; 1997-280170; 1997-297241; 1997-384235; 1997-384559; 1997-502220
XRAM Acc No: C96-047181
XRPX Acc No: N96-126667

Biocompatible **lead for conducting electrical signals - from implants in living tissue which consists of a zirconium-containing core with a protective coating of** zirconium oxide **or nitride**

Patent Assignee: SMITH & NEPHEW RICHARDS INC (SMIN)
Inventor: ASGIAN C M; DAVIDSON J A

Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5496359	A	19960305	US 89385285	A	19890725	199615	B
			US 92819348	A	19920109		
			US 92830720	A	19920204		
			US 92919932	A	19920727		
			US 93112587	A	19930826		

Priority Applications (No Type Date): US 93112587 A 19930826; US 89385285 A

19890725; US 92819348 A 19920109; US 92830720 A 19920204; US 92919932 A 19920727

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5496359	A		11	A61N-001/04	CIP of application US 89385285 CIP of application US 92819348 CIP of application US 92830720 CIP of application US 92919932 CIP of patent US 5037438 CIP of patent US 5152795 CIP of patent US 5258022 CIP of patent US 5282850

Abstract (Basic): US 5496359 A

A **biocompatible** lead for conducting electrical signals to or from an organ in a living body comprises: an elongate flexible body having distal and proximal ends, the flexible body comprising: (a) an electrically conductive core of low elastic modulus metallic compsn. for carrying the electrical signals; (b) a corrosion-resistant, **biocompatible** , durable, stable coating selected from the group consisting of Zr oxides, ranging in colour from blue to black, and Zr nitrides, ranging in colour from yellow to orange; the coating disposed on surfaces of the core exposed to body fluid and body tissue when the lead is inserted into the living body.

USE - Fabrication of cardiovascular implants and **surgical tools** for use in cardiovascular surgery.

ADVANTAGE - Coating exhibit: enhanced **biocompatibility** ; micro-fretting resistance; corrosion resistance; durability; electrically insulative.

Dwg.3A/5

Title Terms: **BIOCOMPATIBLE** ; LEAD; CONDUCTING; ELECTRIC; SIGNAL; IMPLANT; LIVE; TISSUE; CONSIST; ZIRCONIUM; CONTAIN; CORE; PROTECT; COATING; ZIRCONIUM; OXIDE; NITRIDE

Derwent Class: D22; L02; L03; M13; P34; S05

International Patent Class (Main): A61N-001/04

File Segment: CPI; EPI; EngPI

12/5/13 (Item 13 from file: 347)

DIALOG(R)File 347:JAPIO

05816326

BIO - COMPATIBLE MATERIAL, MANUFACTURE THEREOF, AND **MEDICAL INSTRUMENT**

PUB. NO.: 10-099426 [JP 10099426 A]

PUBLISHED: April 21, 1998 (19980421)

INVENTOR(s): TERANO MINORU
YUI NOBUHIKO
KAWAMOTO HISAFUMI

APPLICANT(s): TERANO MINORU [000000] (An Individual), JP (Japan)
YUI NOBUHIKO [000000] (An Individual), JP (Japan)
TERUMO CORP [365358] (A Japanese Company or Corporation), JP (Japan)
CHISSO CORP [000207] (A Japanese Company or Corporation), JP (Japan)

APPL. NO.: 08-277476 [JP 96277476]

FILED: September 27, 1996 (19960927)

INTL CLASS: [6] A61L-031/00; A61L-029/00

JAPIO CLASS: 28.2 (SANITATION -- Medical); 14.2 (ORGANIC CHEMISTRY -- High Polymer Molecular Compounds)

JAPIO KEYWORD:R059 (MACHINERY -- Freeze Drying); R086 (MEDICAL TREATMENT -- Artificial Internal Organs); R115 (X-RAY APPLICATIONS)

ABSTRACT

PROBLEM TO BE SOLVED: To provide a polymeric material of polyolefine for medical use which has a surface excellent in blood coagulation resistance or in thrombosis resis tance.

SOLUTION: At least one kind of polymer of 100 parts by weight having a repeating unit that is derived from at least one kind of monomer selected from a group consisting of an olefine monomer of carbon number 2 to 10 and a diene monomer of carbon number 4 to 15, and a polymer material making a principal component of a nucleus making agent 0.003 to 0.5 parts by weight are meltedly molded, so that a **biocompatible** material having a surface region of a micro-phase separation structure consisting of a **crystalline** region and a noncrystalline region on its surface can be obtained. The **medical instrument** such as a blood circulating circuit, blood bag, and catheter manufactured from this **bio - compatible** material can effectively prevent the coagulation of blood.

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Set     Items   Description
S1     159802   (THREAD(2N)CUT???? OR CENTERING OR MEDICAL? OR SURGERY OR -
             SURGICAL?)(2N)(INSTRUMENT? OR TOOL? ?) OR SCALPEL? ? OR SAW OR
              SAWS OR DRILL? ?
S2        101   BIOINERT? OR BIO()INERT?
S3       8072   BIOCOMPATIB? OR BIO()COMPATIB?
S4     753354   BIOINERT? OR BIO()INERT? OR (ALUMINUM OR ZIRCONIUM OR CHRO-
             MIUM)(2N)OXIDE? ? OR SILICON()NITRIDE OR YTZP OR ZTPA OR Y()T-
             ZP OR CRYSTAL? OR NON()(FERROUS OR FERRIC?) OR NONFERROUS OR -
             NONFERRIC OR BIOLOX OR ZIOLOX
S5      73082   ZICONIA OR ZRO2 OR AL2O3 OR CR2O3 OR SI3N4
S6     808676   S4 OR S5
S7         13   S1 AND (S2 OR S6) AND S3
S8          3   S7 AND IC=(A61B OR C04B)
S9         10   S7 NOT S8
S10        13   S7
S11        13   IDPAT (sorted in duplicate/non-duplicate order)
S12        13   IDPAT (primary/non-duplicate records only)
? show files
File 347:JAPIO Oct 1976-2003/Feb(Updated 030603)
         (c) 2003 JPO & JAPIO
File 350:Derwent WPIX 1963-2003/UD,UM &UP=200338
         (c) 2003  Thomson Derwent
File 371:French Patents 1961-2002/BOPI 200209
         (c) 2002 INPI.  All rts. reserv.
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FT Patents

10/5,K/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00993737
ANTI-MICROBIAL COATINGS HAVING INDICATOR PROPERTIES AND WOUND DRESSINGS
PATENT ASSIGNEE:
Nucryst Pharmaceuticals Corp., (2969601), 10102 - 114 Street, Fort Saskatchewan, Alberta T8L 3W4, (CA), (Proprietor designated states: all)
INVENTOR:
BURRELL, Robert, Edward, 52055, R.R. 221, Sherwood Park, Alberta T8E 1C6, (CA)
PRECHT, Roderick, John, 13143 - 34 Street, Edmonton, Alberta T5A 3K1, (CA)
LEGAL REPRESENTATIVE:
Lawrence, Peter Robin Broughton et al (32881), GILL JENNINGS & EVERY, Broadgate House, 7 Eldon Street, London EC2M 7LH, (GB)
PATENT (CC, No, Kind, Date): EP 984698 A2 000315 (Basic)
EP 984698 B1 030416
WO 98041095 980924
APPLICATION (CC, No, Date): EP 98902901 980217; WO 98CA102 980217
PRIORITY (CC, No, Date): US 818869 970317
DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: A01N-059/00
CITED PATENTS (EP B): EP 255248 A; EP 395300 A; EP 430608 A; WO 92/11043 A; WO 93/23092 A; WO 95/13704 A; GB 2121355 A; GB 2132939 A; GB 2281212 A; GB 2298612 A; US 5030302 A
CITED PATENTS (WO A): EP 261642 A ; GB 2063920 A ; US 5645824 A
CITED REFERENCES (EP B):
DATABASE WPI Week 88201988 Derwent Publications Ltd., London, GB; AN 88-136448 XP002070661 & JP 63 078051 A (TEIJIN LTD);
CITED REFERENCES (WO A):
DATABASE WPI Week 88201988 Derwent Publications Ltd., London, GB; AN 88-136448 XP002070661 & JP 63 078051 A (TEIJIN LTD);
NOTE:
No A-document published by EPO
LEGAL STATUS (Type, Pub Date, Kind, Text):

Assignee:	011121 A2	Transfer of rights to new applicant: WESTAIM BIOMEDICAL CORP. (2969600) 10102 - 114 Street Fort Saskatchewan, Alberta T8L 3W4 CA
Application:	20000315 A2	Published application without search report
Grant:	030416 B1	Granted patent
Assignee:	020116 A2	Transfer of rights to new applicant: Nucryst Pharmaceuticals Corp. (2969601) 10102 - 114 Street Fort Saskatchewan, Alberta T8L 3W4 CA
Application:	990224 A2	International application (Art. 158(1))
Examination:	20000315 A2	Date of request for examination: 19991015

LANGUAGE (Publication,Procedural,Application): English; English; English

...SPECIFICATION wound closures, drains, shunts, dressings, connectors, prosthetic devices, pacemaker leads, needles, dental prostheses, ventilator tubes, **surgical instruments** , wound dressings, incontinent pads, sterile packaging clothing footwear, personal hygiene products such as diapers and...

...other plastics and rubbers. For indwelling medical devices, the device will be made of a **bioinert** or **biocompatible** material. The device may take on any shape dictated by its utility, ranging from flat...

10/5,K/2 (Item 2 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00565489
Surgical instrument locking mechanism
Chirurgisches Instrument mit einer Sperrmechanik
Mecanisme de blocage pour instruments chirurgicaux
PATENT ASSIGNEE:
United States Surgical Corporation, (304771), 150 Glover Avenue, Norwalk, Connecticut 06856, (US), (applicant designated states: DE;FR;GB;IT)
INVENTOR:
Nicholas, David A., 148 Cottage Street, Trumbull, CT 06611, (US)
LEGAL REPRESENTATIVE:
Marsh, Roy David et al (45988), Hoffmann Eitle & Partner Patent- und Rechtsanwalte Postfach 81 04 20, D-81904 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 565049 A1 931013 (Basic)
EP 565049 B1 951227
APPLICATION (CC, No, Date): EP 93105678 930406;
PRIORITY (CC, No, Date): US 863951 920406
DESIGNATED STATES: DE; FR; GB; IT
INTERNATIONAL PATENT CLASS: A61B-017/28;
CITED PATENTS (EP A): US 4614187 A; US 4614187 A; EP 543107 A

ABSTRACT EP 565049 A1
An endoscopic or laparoscopic surgical instrument (1) having an internally disposed locking mechanism located within a barrel portion (8) of a handle assembly (2). The instrument includes a handle assembly (2) having a pivoting handle (6) and a stationary handle (7), a barrel portion (8) to which an elongated body assembly (3) is secured, and a locking mechanism for releasably positioning a tool mechanism (30) located at the distal end of the body assembly. In one embodiment the locking mechanism comprises a trigger (12), a brake (14) and a latch spring (15). In another embodiment the locking mechanism comprises a latch spring (15) and a locking block. A rotational knob (18) and locking member may also be provided to position the body assembly at various orientations to the longitudinal axis. (see image in original document)
ABSTRACT WORD COUNT: 137

LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 931013 A1 Published application (A1with Search Report ;A2without Search Report)
Examination: 940511 A1 Date of filing of request for examination: 940314
Examination: 940907 A1 Date of despatch of first examination report: 940722
Grant: 951227 B1 Granted patent
Oppn None: 961218 B1 No opposition filed
LANGUAGE (Publication,Procedural,Application): English; English; English

...SPECIFICATION and coatings such as PFTE (Teflon), urethane and epoxies may provide suitable insulation for the **surgical instrument** having an

electrocautery feature, in the preferred embodiment of the present invention the body assembly is coated with a polymer such as diparaxylylene, which is a completely linear and highly **crystalline** material, manufactured by Union Carbide Corporation and known as parylene. Parylene provides a pin-hole free coating which is **biocompatible** and completely conforms to the shape of the instrument in a uniform manner. Parylene is...

10/5,K/3 (Item 3 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00998729
AMORPHOUS HYDROGENATED CARBON FILM
FILM DE CARBONE HYDROGENE AMORPHE
Patent Applicant/Assignee:
FUNDACAO DE AMPARO A PESQUISA DO ESTADO DE SAO PAULO, Rua Pio XI, 1500, Alto da Lapa, CEP-05468-901 Sao Paulo, SP, BR, BR (Residence), BR (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
GONCALVES NETO Luiz, Rua Benedito da Silva, CEP-13560-090 Sao Carlos, SP, BR, BR (Residence), BR (Nationality), (Designated only for: US)
MANSANO Ronaldo D, Rua Jamil Hajal, ndegrees 123, CEP-04164-020 Sao Paulo, SP, BR, BR (Residence), BR (Nationality), (Designated only for: US)
CIRINO Giuseppe A, Rua Aida Lang Bartolato, ndegrees 57, CEP-05325-060 Sao Paulo, SP, BR, BR (Residence), BR (Nationality), (Designated only for: US)
ZAMBOM Luiz S, Rua Jose Alves Cunha Lima, CEP-05360-050 Sao Paulo, SP, BR , BR (Residence), BR (Nationality), (Designated only for: US)
VERDONCK Patrick B, Av. Dr. Candido Mota Filho, ndegrees 521, ap. 22, Ed. Santa Clara, CEP-05351-000 Sao Carlos, SP, BR, BR (Residence), BR (Nationality), (Designated only for: US)
Legal Representative:
GAIARSA Lucas M (et al) (agent), Av. Brigadeiro Faria Lima, ndegrees 1485, 12th Floor, CEP-01452-904 Sao Paulo, SP, BR,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200327350 A1 20030403 (WO 0327350)
Application: WO 2002BR67 20020508 (PCT/WO BR0200067)
Priority Application: BR 20015474 20010926
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: C23C-014/34
International Patent Class: C23C-016/26
Publication Language: English
Filing Language: English

English Abstract
The present invention concerns an improved process for the deposition of

amorphous hydrogenated carbon film, more specifically an improved low temperature, low power and low vacuum cathodic sputtering process. The invention also concerns the film produced by said process and articles containing an amorphous hydrogenated carbon film coating.

Legal Status (Type, Date, Text)
Publication 20030403 A1 With international search report.

Detailed Description
... the process of the invention, the following being cited as mere examples thereof.

glass, silicon, **silicon nitride** , steel, iron, **non - ferrous** metals, thermoset and thermoplastic polymers, elastomers, wood, **crystals** , minerals, organic materials, etc. The corresponding applications also vary widely, among which we can cite...phase diffraction gratings, holograms, active optical material on diffractive optical elements, coating of prosthesis and **surgical instruments** in general aiming at both low friction between the component parts and **bio - compatibility** , especially the hemocompatibility, mechanical or electroniG components subject to chemically and mechanically aggressive environments; ionic...

10/5,K/5 (Item 5 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00874457 **Image available**
A METHOD OF PRODUCING A CERAMIC BODY BY COALESCENCE AND THE CERAMIC BODY PRODUCED

Patent Applicant/Assignee:
CK MANAGEMENT AB UB, Ringvagen 50, S-118 67 STOCKHOLM, SE, SE (Residence) , SE (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
OLSSON Kent, Ringvagen 50, S-118 67 STOCKHOLM, SE, SE (Residence), SE (Nationality), (Designated only for: US)
JIANGUO Li, Krokvagen 5, S-141 31 HUDDINGE, SE, SE (Residence), SE (Nationality), (Designated only for: US)
Legal Representative:
ALBIHNS STOCKHOLM AB (et al) (agent), Box 5581, S-114 85 STOCKHOLM, SE,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200208478 A1 20020131 (WO 0208478)
Application: WO 2001SE1673 20010725 (PCT/WO SE0101673)
Priority Application: SE 20002770 20000725
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: C22C-001/04
International Patent Class: B21J-005/00; B22F-003/02; C22C-029/00
Publication Language: English
Filing Language: English

English Abstract
A method of producing a ceramic body by coalescence, wherein the method comprises the steps of a) filling a pre-compacting mould with ceramic material in the form of powder, pellets, grains and the like, b) pre-compacting the material at least once and c) compressing the material in a compression mould by at least one stroke, where a striking unit emits enough kinetic energy to form the body when striking the material inserted in the compression mould, causing coalescence of the material. A method of producing a ceramic body by coalescence, wherein the method comprises compressing material in the form of a solid ceramic body in a compression mould by at least one stroke, where a striking unit emits enough energy to cause coalescence of the material in the body.Products obtained by the inventive methods.

Legal Status (Type, Date, Text)
Publication 20020131 A1 With international search report.
Publication 20020131 A1 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.
Examination 20020328 Request for preliminary examination prior to end of 19th month from priority date

Claim
... may be chosen from the group comprising minerals, oxides, carbides, nitrides. As examples alumina, silica, **silicon nitride** , zirconia, silicon carbide and hydroxyapatite may be mentioned. The compression strokes need to emit a...may be used in medical devices such as medical implants or bone cement in orthopaedic **surgery** , **instruments** or diagnostic equipment. Such implants may be for examples skeletal or tooth prostheses. According to...

...such as hydroxyapatite and zirconia. A material to be used in implants needs to be **biocompatible** and haemocompatible as well as mechanically durable, such as hydroxyapatite and zirconia or other I...

...bearings and engine parts. Here follows several applications for some of the materials. Applications for **silicon nitride** are crucibles, spray nozzles, tubes, cutting edges, jointing rings, ball bearings and engine parts. Alumina...post-sintering. The addition may also need to fulfil the requirements for bioniaterial applications. For **Si3N4** , wide variations of sintering aids are used depending on sintering technique and the application. The...

...are A1203, Y203, SiO2, MgO and Yb2O3 in various portions and combinations. Note that **Si3N4** already contains some SiO2 on the particle surfaces (can be increased by calcination) that will...

10/5,K/6 (Item 6 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00874129 **Image available**
A METHOD OF PRODUCING A MULTILAYER BODY BY COALESCENCE AND THE MULTILAYER BODY PRODUCED
Patent Applicant/Assignee:
CK MANAGEMENT AB UB, Ringvagen 50, S-118 21 Stockholm, SE, SE (Residence)

, SE (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
OLSSON Kent, Ringvagen 50, S-118 67 Stockholm, SE, SE (Residence), SE (Nationality), (Designated only for: US)
JIANGUO Li, Krokvagen 5, S-141 31 Huddinge, SE, SE (Residence), SE (Nationality), (Designated only for: US)
Legal Representative:
ALBIHNS STOCKHOLM AB (agent), Box 5581, S-114 85 Stockholm, SE,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200207917 A1 20020131 (WO 0207917)
Application: WO 2001SE1672 20010725 (PCT/WO SE0101672)
Priority Application: SE 20002770 20000725
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: B22F-003/02
International Patent Class: B21J-005/00
Publication Language: English
Filing Language: English

English Abstract
A method of producing a multilayer body by coalescence, characterised in that the method comprises the steps of a) filling a pre-compacting mould with a start material in the form of powder, pellets, grains and the like, b) pre-compacting the start material at least once and c) compressing the material in a compression mould by at least one stroke, where a striking unit emits enough kinetic energy to form the body when striking the material inserted in the compression mould, causing coalescence of the material, d) at least one further material being inserted into the mould in the form of powder, pellets, grains and the like, either in step a), after compacting in step b) or after compressing the first material in step c), e) if necessary, further pre-compacting and/or compressing being performed after the insertion of the at least one further material.

Legal Status (Type, Date, Text)
Publication 20020131 A1 With international search report.
Publication 20020131 A1 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.
Examination 20020404 Request for preliminary examination prior to end of 19th month from priority date

Claim
... titanium,
UHMWPE PNIMA, PEEK, rubber, alumina, zirconia, silicon carbide, hydroxyapatite or **silicon nitride** . The multilayer may comprise a composite material containing reinforcements fibres or powders from the group comprising carbon, metals, glass or ceramics such as alumina, silica, **silicon nitride** , zirconia, silicon carbide. The compression strokes need to emit a total energy corresponding to at...may be used in medical devices such as medical implants or bone cement in orthopaedic

surgery , **instruments** or diagnostic equipment. Such implants may be for examples skeletal or tooth prostheses. According to...

...layer of hydroxyapatite or zirconia. A material to be used in implants needs to be **biocompatible** and haemoco atible
5 as well as mechanically durable, such as hydroxyapatite and zirconia...

10/5,K/7 (Item 7 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00874128 **Image available**
A METHOD OF PRODUCING A METAL BODY BY COALESCENCE AND THE METAL BODY PRODUCED

Patent Applicant/Assignee:
CK MANAGEMENT AB UB, Ringvagen 50, S-118 67 Stockholm, SE, SE (Residence) , SE (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
OLSSON Kent, Ringvagen 50, S-118 67 Stockholm, SE, SE (Residence), SE (Nationality), (Designated only for: US)
JIANGUO Li, Krokvagen 5, S-141 31 Huddinge, SE, SE (Residence), SE (Nationality), (Designated only for: US)
Legal Representative:
ALBIHNS STOCKHOLM AB (et al) (agent), Box 5581, S-114 85 Stockholm, SE,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200207916 A1 20020131 (WO 0207916)
Application: WO 2001SE1670 20010725 (PCT/WO SE0101670)
Priority Application: SE 20002770 20000725
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: B22F-003/02
International Patent Class: B21J-005/00
Publication Language: English
Filing Language: English

English Abstract
A method of producing a metal body by coalescence, wherein the method comprises the steps of a) filling a pre-compacting mould with metal material in the form of powder, pellets, grains and the like, b) pre-compacting the material at least once and c) compressing the material in a compression mould by at least one stroke, where a striking unit emits enough kinetic energy to form the body when striking the material inserted in the compression mould, causing coalescence of the material. A method of producing a metal body by coalescence, wherein the method comprises compressing material in the form of a solid metal body in a compression mould by at least one stroke, where a striking unit emits enough energy to cause coalescence of the material in the body. Products obtained by the inventive methods.

Legal Status (Type, Date, Text)

Publication 20020131 A1 With international search report.
Publication 20020131 A1 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.
Examination 20020328 Request for preliminary examination prior to end of 19th month from priority date

Claim
... The metal is chosen from the group comprising light metal or alloy, ferrous based alloy, **non ferrous** based alloy and high melting metal or hard alloy. The metal may be chosen from...the method of the invention, may be used in medical devices, such as implants or **medical instruments** , for example **surgical** knives and 1 5 diagnostic equipment. Such implants may be for examples skeletal or tooth..:Ti6Al4V, stainless steel and Co28Cr6Mo. A material to be used in implants needs to be **biocompatible** and haemocompatible as well as mechanically durable, such as titanium or other suitable metals mentioned...

...materials. Stainless steel: hip ball, components that need to be resistant to corrosion. Tool steel: **drills** , hammers, screw drivers and mortise chisel. Aluminium alloy: in cars to decrease weight, many applications...

10/5,K/8 (Item 8 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00874123 **Image available**
A METHOD OF PRODUCING A COMPOSITE BODY BY COALESCENCE AND THE COMPOSITE BODY PRODUCED
Patent Applicant/Assignee:
CK MANAGEMENT AB UB, Ringvagen 50, S-118 67 Stockholm, SE, SE (Residence) , SE (Nationality), (For all designated states except: US)
JIANGU Li, Krokvagen 5, S-141 31 Huddinge, SE, SE (Residence), SE (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
OLSSON Kent, Ringvagen 50, S-118 67 Stockholm, SE, SE (Residence), SE (Nationality), (Designated only for: US)
Legal Representative:
LARSSON Karin (et al) (agent), Albihns Stockholm AB, Box 5581, S-114 85 Stockholm, SE,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200207911 A1 20020131 (WO 0207911)
Application: WO 2001SE1674 20010725 (PCT/WO SE0101674)
Priority Application: SE 20002770 20000725
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: B21J-005/00
International Patent Class: B22F-003/02
Publication Language: English

Filing Language: English

English Abstract
A method of producing a composite body by coalescence, wherein the method comprises the steps of a) filling a pre-compacting mould with composite material in the form of powder, pellets, grains and the like, b) pre-compacting the material at least once and c) compressing the material in a compression mould by at least one stroke, where a striking unit emits enough kinetic energy to form the body when striking the material inserted in the compression mould, causing coalescence of the material. A method of producing a composite body by coalescence, wherein the method comprises compressing material in the form of a solid composite body in a compression mould by at least one stroke, where a striking unit emits enough energy to cause coalescence of the material in the body. Products obtained by the inventive methods.

Legal Status (Type, Date, Text)
Publication 20020131 A1 With international search report.
Publication 20020131 A1 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.
Examination 20020328 Request for preliminary examination prior to end of 19th month from priority date

Claim
... stainless steel, aluminium alloy, titanium, UHMWPE, PMNIA, PEEK, rubber, alumina, zirconia, silicon carbide, hydroxyapatite or **silicon nitride** . The composite may contain reinforcements from the group comprising carbon, metals, glass or ceramics such as alumina, silica, **silicon nitride** , zirconia, silicon carbide. The compression strokes need to emit a total energy corresponding to at...may be used in medical devices such as medical implants or bone cement in orthopaedic **surgery** , **instruments** or diagnostic equipment. Such implants may be for example skeletal or tooth prostheses. According to...

...such as hydroxyapatite and zirconia. A material to be used in implants needs to be **biocompatible** and haemocompatible as well as mechanically durable, such as hydroxyapatite and zirconia or other 1...

10/5,K/9 (Item 9 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00874122 **Image available**
A METHOD OF PRODUCING A POLYMER BODY BY COALESCENCE AND THE POLYMER BODY PRODUCED
Patent Applicant/Assignee:
CK MANAGEMENT AB UB, Ringvagen 50, S-118 67 Stockholm, SE, SE (Residence) , SE (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
OLSSON Kent, Ringvagen 50, S-118 67 Stockholm, SE, SE (Residence), SE (Nationality), (Designated only for: US)
JIANGUO Li, Krokvagen 5, S-141 31 Huddinge, SE, SE (Residence), SE (Nationality), (Designated only for: US)
Legal Representative:

ALBIHNS STOCKHOLM AB (et al) (agent), Box 5581, S-114 85 Stockholm, SE,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200207910 A1 20020131 (WO 0207910)
Application: WO 2001SE1671 20010725 (PCT/WO SE0101671)
Priority Application: SE 20002770 20000725
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: B21J-005/00
International Patent Class: B22F-003/02; B29C-043/00
Publication Language: English
Filing Language: English

English Abstract
A method of producing a polymer body by coalescence, wherein the method comprises the steps of a) filling a pre-compacting mould with polymer material in the form of powder, pellets, grains and the like, b) pre-compacting the material at least once and c) compressing the material in a compression mould by at least one stroke, where a striking unit emits enough kinetic energy to form the body when striking the material inserted in the compression mould, causing coalescence of the material. A method of producing a polymer body by coalescence, wherein the method comprises compressing material in the form of a solid polymer body in a compression mould by at least one stroke, where a striking unit emits enough energy to cause coalescence of the material in the body. Products obtained by the inventive methods.

Legal Status (Type, Date, Text)
Publication 20020131 A1 With international search report.
Publication 20020131 A1 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.
Examination 20020328 Request for preliminary examination prior to end of 19th month from priority date
Correction 20030501 Corrected version of Pamphlet: page 36, description, replaced by correct page 36
Republication 20030501 A1 With international search report.

Claim
... may be used in medical devices such as medical implants or bone cement in orthopaedic **surgery** , **instruments** or diagnostic equipment. Such implants may be for examples skeletal or tooth prostheses. According to...

...such as UHMWPE and PNEVIA. A material to be used in implants needs to be **biocompatible** and haemocompatible as well as mechanically durable, such as UHMVVTE and PN84A or other suitable...Three polymers were chosen for investigation. Two are thermoplastics and of these one is semi- **crystalline** , LJHMVvTPE with approximately 50% amorphous content. The second thermoplastic polymer, PMMA, is pure amorphous. The...

10/5,K/11 (Item 11 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00748341 **Image available**

MEDICAL INSTRUMENTS
INSTRUMENTS CHIRURGICAUX
MEDIZINISCHE INSTRUMENTE

Patent Applicant/Assignee:
CERAMTEC AG, Innovative Ceramic Engineering, Fabrikstrasse 23 - 29, D-73207 Plochingen, DE, DE (Residence), DE (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
FRANKE Ralf-Peter, Rosenackerweg 14, D-89160 Dornstadt, DE, DE (Residence), DE (Nationality), (Designated only for: US)
FRIPAN Michael, Sudstrasse 19, D-71522 Backnang, DE, DE (Residence), DE (Nationality), (Designated only for: US)
BURGER Wolfgang, Muhlhaldenweg 75, D-73207 Plochingen, DE, DE (Residence), DE (Nationality), (Designated only for: US)
RICHTER Herbert, Schlehenweg 14, D-73257 Kongen, DE, DE (Residence), DE (Nationality), (Designated only for: US)
Legal Representative:
UPPENA Franz, Dynamit Nobel Aktiengesellschaft, Patentabteilung, D-53839 Troisdorf, DE

Patent and Priority Information (Country, Number, Date):
Patent: WO 200061517 A1 20001019 (WO 0061517)
Application: WO 2000EP3240 20000411 (PCT/WO EP0003240)
Priority Application: DE 19916149 19990411
Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: C04B-035/01
International Patent Class: A61B-017/16; A61B-017/32
Publication Language: German
Filing Language: German

English Abstract
The present invention relates to the use of biocompatible and **bioinert** materials for producing **medical / surgical instruments** . The invention also relates to **medical / surgical instruments** made of **biocompatible** and **bioinert** materials. The invention further relates to tools made of **biocompatible** and **bioinert** materials for the use as **medical / surgical instruments** . The invention also relates to the use of tools made of **biocompatible** and **bioinert** materials in surgery.

Legal Status (Type, Date, Text)
Publication 20001019 A1 With international search report.
Publication 20001019 A1 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.
Examination 20001207 Request for preliminary examination prior to end of 19th month from priority date

10/5,K/12 (Item 12 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00578258 **Image available**
ARTICLE AND METHOD FOR COUPLING MUSCLE TO A PROSTHETIC DEVICE
Patent Applicant/Assignee:
THE UNIVERSITY OF CINCINNATI,
MELVIN David B,
Inventor(s):
MELVIN David B,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200041631 A1 20000720 (WO 0041631)
Application: WO 2000US773 20000112 (PCT/WO US0000773)
Priority Application: US 99115727 19990112
Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW GH GM KE LS MW SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
Main International Patent Class: A61B-017/04
Publication Language: English

English Abstract
This invention is a prosthetic linkage (110) for use with skeletal muscle (M). The linkage (110) includes a plurality of longitudinally extending filaments (14) forming a strand (12). The strand (12) has a first portion (20) that includes a core portion (22) wherein the filaments (14) extend generally parallel to each other, and an exterior portion (24) wherein the filaments (14) are braided along its longitudinal axis around the core portion (22). The strand (12) also includes a second portion (30) wherein the filaments (14) are generally randomly oriented, and sized for integration into skeletal muscle (M).

Legal Status (Type, Date, Text)
Examination 20011122 Request for preliminary examination prior to end of 19th month from priority date

Claim
... e.g., polyethylenes, such as high molecular weight polyethylenes, or very high molecular weight linearly **crystalline** polyethylenes (e.g., the brand name SPETRA), polypropylenes, such very high molecular weight polypropylenes), polytetrafluroethylene...into the muscle, such as a tapered needle 174 (either straight or curved), or other **surgical instrument** , which 1 5 will be discussed below in greater detail. As exemplified in Fig. 4...

...be suitable for use in the present invention as a cover material 34 can include **biocompatible** gelatin, albumin, other proteins and polysaccharidess, and the like. Turning back to Figs....

10/5,K/13 (Item 13 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00450631

ANTI-MICROBIAL COATINGS HAVING INDICATOR PROPERTIES AND WOUND DRESSINGS
REVETEMENTS ANTIMICROBIENS AGISSANT EN TANT QU'INDICATEURS ET SPARADRAPS

Patent Applicant/Assignee:
WESTAIM TECHNOLOGIES INC,
BURRELL Robert Edward,
PRECHT Roderick John,
Inventor(s):
BURRELL Robert Edward,
PRECHT Roderick John,

Patent and Priority Information (Country, Number, Date):
Patent: WO 9841095 A2 19980924
Application: WO 98CA102 19980217 (PCT/WO CA9800102)
Priority Application: US 97818869 19970317
Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG
Main International Patent Class: A01N-059/16
International Patent Class: G01N-021/45; A61L-015/18; A61L-031/00; A61F-013/00

English Abstract

Multilayer anti-microbial materials formed to produce an interference colour, and thus an indicator of anti-microbial effect, are provided. The materials include a partly reflective base layer and a partly reflective, partly transmissive top layer balanced to produce an interference colour. The top layer is formed from an anti-microbial metal with atomic disorder. Dissolution or a change in composition of the top layer on contacting an alcohol or electrolyte causes a change in optical path length so as to produce a change in the interference colour of the material. Multilayer, laminated wound dressings are also provided. The dressing includes a first and second layer, and preferably a third layer. The first and third layers are formed of perforated, non-adherent materials and most preferably carry an anti-microbial coating as above. The second layer is sandwiched between the first and third layers and is formed of an absorbent material. At least one of the layers is formed from a plastic material. The layers are laminated together by ultrasonic welds spaced intermittently on the dressing to allow the dressing to be cut to size with delaminating.

Detailed Description

... wound closures, drains, shunts, dressings, connectors, prosthetic devices, pacemaker leads, needles, dental prostheses, ventilator tubes, **surgical instruments** , wound dressings, incontinent pads, sterile packaging clothing footwear, personal hygiene products such as diapers and...other plastics and rubbers. For indwelling medical devices, the device will be made of a **bioinert** or **biocompatible** material. The device may take on any shape dictated by its utility, ranging from flat ...

```
Set     Items   Description
S1      52386   (THREAD(2N)CUT???? OR CENTERING OR MEDICAL? OR SURGERY OR -
             SURGICAL?)(2N)(INSTRUMENT? OR TOOL? ?) OR SCALPEL? ? OR SAW OR
              SAWS OR DRILL? ?
S2        256   BIOINERT? OR BIO()INERT?
S3      21084   BIOCOMPATIB? OR BIO()COMPATIB?
S4     252096   BIOINERT? OR BIO()INERT? OR (ALUMINUM OR ZIRCONIUM OR CHRO-
             MIUM)(2N)OXIDE? ? OR SILICON()NITRIDE OR YTZP OR ZTPA OR Y()T-
             ZP OR CRYSTAL? OR NON()(FERROUS OR FERRIC?) OR NONFERROUS OR -
             NONFERRIC OR BIOLOX OR ZIOLOX
S5      10510   ZICONIA OR ZRO2 OR AL2O3 OR CR2O3 OR SI3N4
S6     256204   S4 OR S5
S7        755   S1 AND (S2 OR S6) AND S3
S8         16   S1(S)(S2 OR S6)(S)S3
S9         16   IDPAT (sorted in duplicate/non-duplicate order)
S10        16   IDPAT (primary/non-duplicate records only)
? show files
File 348:EUROPEAN PATENTS 1978-2003/Jun W01
         (c) 2003 European Patent Office
File 349:PCT FULLTEXT 1979-2002/UB=20030612,UT=20030605
         (c) 2003 WIPO/Univentio
```

Biblio NPL

11/5/2 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

11033609 BIOSIS NO.: 199799654754
Cora rotary pump for implantable left ventricular assist device: Biomaterial aspects.
AUTHOR: Monties J R; Dion I; Havlik P; Rouais F; Trinkl J; Baquey C
JOURNAL: Artificial Organs 21 (7):p730-734 1997
ISSN: 0160-564X

ABSTRACT: Our group is developing a left ventricular assist device based on the principle of the Maillard-Wankel rotative compressor: it is a rotary, not centrifugal, pump that produces a pulsatile flow. Stringent requirements have been defined for construction materials. They must be light, yet sufficiently hard and rigid, and able to be machined with high precision. The friction coefficient must be low and the wear resistance high. The materials must be chemically inert and not deformable. Also, the materials must be **biocompatible** , and the blood contacting surface must be hemocompatible. We assessed the materials in terms of physiochemistry, mechanics, and tribology to select the best for hemocompatibility (determined by studies of protein adsorption; platelet, leukocyte, and red cell retention; and hemolysis, among other measurements) and **biocompatibility** (determined by measurement of complement activation and toxicity, among other criteria). Of the materials tested, for short- and middle-term assistance, we chose titanium alloy (Ti-6Al-4V) and alumina ceramic (Al-2O-3) and for long-term and permanent use, composite materials (TiN coating on graphite). We **saw** that the polishing process of the substrate must be improved. For the future, the best coating material would be diamond-like carbon (DLC) or **crystalline** diamond coating.

11/5/3 (Item 1 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

06224664 E.I. No: EIP02497254809
Title: Applications of shape-memory alloys in medical instruments
Author: Fischer, Harald; Vogel, B.; Grunhagen, A.; Brhel, K.P.; Kaiser, M.
Conference Title: Proceedings of the International Conference on Shape Memory and Superelastic Technologies and Shape Memory Materials (SMST-SMM 2001)
Conference Location: Kumning, China Conference Date: 20010902-20010906
Source: Materials Science Forum v 394-395 2002. p 9-16
Abstract: Applications of shape-memory alloys (SMA) in medical instruments were discussed. NiTi is widely used as smart implants because of its good **biocompatibility** . NiTi undergo a phase transformation in their **crystal** structure when cooled from the high temperature phase to the low temperature phase. Hingeless instruments use the elasticity of spring materials instead of pivoting joints to open and close the jaws of grasping forceps or the blades of scissors. (Edited abstract) 11 Refs.
Descriptors: *Biomedical equipment; Shape memory effect; Nickel alloys; Porous materials; Biocompatibility; Biopsy; Radioisotopes; Phase transitions; Crystal structure; Stresses; Corrosion resistance; Endoscopy

Classification Codes:
461.9.1 (Immunology); 622.1.1 (Radioisotopes); 933.1.1 (Crystal Lattice)
462.1 (Biomedical Equipment, General); 931.2 (Physical Properties of Gases, Liquids & Solids); 548.2 (Nickel Alloys); 461.9 (Biology); 461.6 (Medicine); 622.1 (Radioactive Materials, General); 801.4 (Physical Chemistry); 933.1 (Crystalline Solids); 408.1 (Structural Design, General); 539.1 (Metals Corrosion)
462 (Biomedical Equipment); 931 (Applied Physics Generally); 548 (Nickel & Alloys); 461 (Bioengineering); 622 (Radioactive Materials); 801 (Chemistry); 933 (Solid State Physics); 408 (Structural Design); 539 (Metals Corrosion & Protection; Metal Plating)
46 (BIOENGINEERING); 93 (ENGINEERING PHYSICS); 54 (METALLURGICAL ENGINEERING, METAL GROUPS); 62 (NUCLEAR TECHNOLOGY); 80 (CHEMICAL ENGINEERING, GENERAL); 40 (CIVIL ENGINEERING, GENERAL); 53 (METALLURGICAL ENGINEERING, GENERAL)

11/5/4 (Item 1 from file: 73)

10955775 EMBASE No: 2000431887
Anophthalmic orbital implants
Jordan D.R.
Ophthalmology Clinics of North America (OPHTHALMOL. CLIN. NORTH AM.) (United States) 2000, 13/4 (587-608)
CODEN: OCNAF ISSN: 0896-1549

The ideal orbital implant has been sought for more than a century. Implant evolution has gone from a buried sphere implant (mules) to an exposed integrated implant (Ruedemann) to a partially buried integrated implant (Cutler), to a buried quasi integrated implant (Iowa, Allen), and now with the new porous implants (HA, Medpore), back to a buried integrated implant. Porous materials are currently the preferred orbital implants primarily because of the vascularization and integration that can occur. These implants are less likely to migrate than previously used plastic implants and are associated with a high degree of motility especially when coupled to the overlying artificial eye. Which implant is the best to use is currently a matter of debate. In this author's view the ideal porous implant is one that is **biocompatible** , **bioinert** , nontoxic, nonallergenic, easy to implant and **drill** for pegging, inexpensive, and stable over time. HA appears to satisfy these criteria well and became the material of choice in 1992 in North America. With the introduction of coralline HA by Perry, like the Mules sphere, a new era of anophthalmic rehabilitation began. Like any new product it had strengths and weaknesses that became apparent with time. The high cost of the original Bio-Eye implant was overcome with the development of the synthetic HA (FCISUB3, Cedex, France); however, owing to patent restrictions and marketing, this implant (FCISUB3 synthetic HA) is not well-known in North America at this time and another less costly, alloplastic porous implant (porous polyethylene-Medpore) is becoming popular. Although cost is a crucial factor influencing implant selection, several other factors should be considered. As discussed, not all HA and porous implants are created equal, and although cheaper ones are on the market place they may not be as good because of structural weakness (Molteno M-Sphere), presence of contaminants (Chinese HA), or lack pore interconnectivity (Brazilian implants). There

are also notable differences among the various implants with regard to pore size, pore interconnectivity, and even the microcrystalline architecture. Although porous polyethylene is cheaper than HA, strong, easy to work with, and allows vascularization, the material itself does not provide as desirable a scaffolding as HA does for fibrovascular ingrowth. This may be due to the channels rather than pores, the size of the channels, or the actual material, which has a different **biocompatibility** and biotolerance. With time other materials and techniques certainly will be introduced and may offer further improvements to the present porous implants. One such material still under investigation is the porous form of **aluminum** oxide , a product that has been in use for more than 30 years in orthopedics and dentistry. Not only is it porous with a multiple interconnective porous framework but is structurally strong and cheaper than HA. There is accumulating evidence that host cells seem to grow better on **aluminum oxide** than on HA. Human experience with this material as an orbital implant is in its infancy and time will tell whether it is more advantageous than other porous implants. Although implant developments to date suggests that HA and perhaps other porous implants are more advantageous than previously used orbital implants, we must proceed with caution to avoid repeating problems encountered in the past. Long-term studies with porous implants in place for 10 or 20 years will be valuable in allowing us to assess problems and complications that perhaps may only occur after prolonged implantation. We must also proceed with an open mind, as there is always room for improvement. Other developments will likely take place that may unveil newer material or newer ideas (such as an electronically controlled implants interfaced with a micro-processor able to reproduce even the slightest saccadic eye movement).

DEVICE BRAND NAME/MANUFACTURER NAME: Medpore/Porex/United States; FCI3/FCI/France; Molteno M-Sphere/Innovative Ophthalmic Products/United States; Alumina/FCI/France; Ocu-Guard Supple/Bio Vascular/United States; Vicryl Mesh/Ethicon/United States; Dexon mesh/Davis and Geck/Canada; Bio-Eye
DEVICE MANUFACTURER NAMES: Porex/United States; FCI/France; Innovative Ophthalmic Products/United States; IOP/United States; Bio Vascular/United States; Oculoplastik/Canada; Ethicon/United States; Davis and Geck/Canada
DRUG DESCRIPTORS:
hydroxyapatite; polyethylene; aluminum oxide; politef; polyglactin; polyglycolic acid; titanium; polycarbonate; roseolic acid
CAS REGISTRY NO.: 1306-06-5, 51198-94-8 (hydroxyapatite); 9002-88-4 (polyethylene); 1302-74-5, 1318-23-6, 1344-28-1, 14762-49-3 (aluminum oxide); 9002-84-0, 9039-02-5 (politef); 26780-50-7, 34346-01-5 (polyglactin); 26124-68-5 (polyglycolic acid); 7440-32-6 (titanium); 24936-68-3, 25766-59-0 (polycarbonate); 11052-94-1, 603-45-2 (roseolic acid)

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Set     Items   Description
S1     624231   (THREAD(2N)CUT???? OR CENTERING OR MEDICAL? OR SURGERY OR -
             SURGICAL?)(2N)(INSTRUMENT? OR TOOL? ?) OR SCALPEL? ? OR SAW OR
              SAWS OR DRILL? ?
S2        652   BIOINERT? OR BIO()INERT?
S3      68232   BIOCOMPATIB? OR BIO()COMPATIB?
S4    3295183   BIOINERT? OR BIO()INERT? OR (ALUMINUM OR ZIRCONIUM OR CHRO-
             MIUM)(2N)OXIDE? ? OR SILICON()NITRIDE OR YTZP OR ZTPA OR Y()T-
             ZP OR CRYSTAL? OR NON()(FERROUS OR FERRIC?) OR NONFERROUS OR -
             NONFERRIC OR BIOLOX OR ZIOLOX
S5      93448   ZICONIA OR ZRO2 OR AL2O3 OR CR2O3 OR SI3N4
S6    3351820   S4 OR S5
S7          9   S1(S)(S2 OR S6)(S)S3
S8        341   S1 AND (S2 OR S6) AND S3
S9          9   S7 NOT PY>2002
S10         8   S9 NOT PD>20020328
S11         4   RD (unique items)
? show files
File   2:INSPEC 1969-2003/Jun W2
         (c) 2003 Institution of Electrical Engineers
File   5:Biosis Previews(R) 1969-2003/Jun W2
         (c) 2003 BIOSIS
File   6:NTIS 1964-2003/Jun W3
         (c) 2003 NTIS, Intl Cpyrght All Rights Res
File   8:Ei Compendex(R) 1970-2003/Jun W2
         (c) 2003 Elsevier Eng.  Info. Inc.
File  34:SciSearch(R) Cited Ref Sci 1990-2003/Jun W3
         (c) 2003 Inst for Sci Info
File  35:Dissertation Abs Online 1861-2003/May
         (c) 2003 ProQuest Info&Learning
File  65:Inside Conferences 1993-2003/Jun W3
         (c) 2003 BLDSC all rts. reserv.
File  73:EMBASE 1974-2003/Jun W3
         (c) 2003 Elsevier Science B.V.
File  94:JICST-EPlus 1985-2003/Jun W3
         (c)2003 Japan Science and Tech Corp(JST)
File 144:Pascal 1973-2003/Jun W1
         (c) 2003 INIST/CNRS
File 155:MEDLINE(R) 1966-2003/Jun W3
         (c) format only 2003 The Dialog Corp.
File 172:EMBASE Alert 2003/Jun W3
         (c) 2003 Elsevier Science B.V.
File 198:Health Devices Alerts(R) 1977-2003/Jun W3
         (c) 2003 ECRI-nonprft agncy
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
         (c) 1998 Inst for Sci Info
File  48:SPORTDiscus 1962-2003/May
         (c) 2003 Sport Information Resource Centre
File  71:ELSEVIER BIOBASE 1994-2003/Jun W3
         (c) 2003  Elsevier Science B.V.
File  91:MANTIS(TM) 1880-2002/Oct
         2002 (c) Action Potential
File 162:Global Health 1983-2003/May
         (c) 2003 CAB International
File 164:Allied & Complementary Medicine 1984-2003/Jun
          (c) 2003 BLHCIS
File 467:ExtraMED(tm) 2000/Dec
         (c) 2001 Informania Ltd.
File  31:World Surface Coatings Abs 1976-2003/May
         (c) 2003 Paint Research Assn.
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File 315:ChemEng & Biotec Abs 1970-2003/May

FT NPL

10/3,K/1 (Item 1 from file: 442)
DIALOG(R)File 442:AMA Journals

00122074

Resorbable Plate Fixation in Pediatric Craniofacial Surgery Long-term Outcome (ARTICLE)

IMOLA, MARIO J.; HAMLAR, DAVID D.; SHAO, WEIRU; CHOWDHURY, KHALID; TATUM, SHERARD
Archives of Facial Plastic Surgery
Apr-June, 2001 ; Original : tzq79
LINE COUNT: 00623

... degrades predictably and completely after osteosynthesis has restored adequate intrinsic bone strength, (3) it is **biocompatible** so as not to induce a significant inflammatory foreign body response or immunologic reaction, (4...

... resorbable plates and screws. Other polymers include polyglyconate and polydioxanone. Polyglycolic acid is a hard **crystalline** polymer that resorbs rapidly and looses virtually all of its strength within 1 month. Polylactic...

... random and loosely packed polymer chains interspersed between the orderly and more densely packed strong **crystalline** regions. Polylactic acid can exist in 2 different isomeric configurations: poly L-lactic acid (PLLA... of the resorbable plating systems was both labor intensive and technique sensitive. Specifically, a traditional **drill** , tap, and screw process needs to be performed with each screw placement making sure that the holes are not overdrilled and that the tap and screw paths coincide with the **drill** path. If the holes are not precisely drilled and tapped or the pathways are not...

10/3,K/2 (Item 2 from file: 442)
DIALOG(R)File 442:AMA Journals

00116085

Musculoskeletal Disorders and Orthopedic Conditions (ARTICLE)

BOSKEY, ADELE L.
JAMA, The Journal of the American Medical Association
February 7, 2001; 5 RESEARCH OPPORTUNITIES FOR SPECIFIC DISEASES AND DISORDERS: tzj619
LINE COUNT: 00456

...the clinical arena.57-62/ Sophisticated computer science has also led to the development of **surgical** robotic **tools** .32/

Complementing basic research are newly emerging approaches to assessing the short- and long-term... of bone bonding ability and degradation behaviour in vivo between amorphous calcium phosphate and

highly **crystalline** hydroxyapatite coating. Biomaterials. 1996;17:1771-1777.

10. Lian JB, Hauschka PV, Gallop PM. Properties...60. Sechriest VF, Miao YJ, Niyibizi C, et al. GAG-augmented polysaccharide hydrogel: a novel **biocompatible** and biodegradable material to support chondrogenesis. J Biomed Mater Res. 2000;49:534-541.

61...

10/3,K/3 (Item 3 from file: 442)
DIALOG(R)File 442:AMA Journals

00099128

Oncology (ARTICLE)

JAMA, The Journal of the American Medical Association
June 19, 1996; 23: tzj1833
LINE COUNT: 00551

...Gene Ther. 1995;2:285-294.

11. Hirschowitz EA, Ohwada A, Pascal WR, Russi TJ, **Crystal** RG. In vivo adenovirus mediated gene transfer of the Escherichia coli cytosine deaminase gene to... reasons, theintroduction of new medications into the therapeutic armamentarium isof great benefit.

This past year **saw** the introduction of 2 new topical agents for glaucoma, 1 of which has already been...Various synthetic porous ceramic materials are available as bone-graft substitutes for fracture management. These **crystalline** hydroxyapatite and tricalcium phosphate materials are **biocompatible** and clearly osteoconductive, but slow to biodegrade. Their poor mechanical properties restrict their use to...

10/3,K/4 (Item 4 from file: 442)
DIALOG(R)File 442:AMA Journals

00087993

Amplitudes of Accommodation of Primate Lenses Refilled With Two Typesof Inflatable Endocapsular Balloons (ARTICLE)

NISHI, OKIHIRO; NAKAI, YOSHIKO; YAMADA, YOSHIHARU; MIZUMOTO, YURIKO
Archives of Ophthalmology
Dec, 1993; Laboratory Sciences: p1677
LINE COUNT: 00355

... phacoemulsification with a balloon that eitherapproximates the shape of the nonaccommodated lens or the accommodated **crystalline** lens. Results: In nine of 15 successfully refilled lenses, we were able to perform automated...

... rubbers, offer the most appropriate properties for experimental lens refilling in terms of refractive index, **biocompatibility** , elasticity,transparency, and non-toxicity, although adverse reactions to

silicone breast implants have recently been...

10/3,K/5 (Item 5 from file: 442)
DIALOG(R)File 442:AMA Journals

00087500

Expanded Polytetrafluoroethylene (Gore-Tex Soft-Tissue Patch) in Facial Augmentation (ARTICLE)

MAAS, COREY S.; GNEPP, DOUGLAS R.; BUMPOUS, JEFFERY
Archives of Otolaryngology
Sep, 1993; Original Article: p1008
LINE COUNT: 00401

... EPTFE soft-tissue patch appears to be safe and reliable material for augmentation, demonstrating high **biocompatibility** , low tissue reactivity, and increasing stability over time. (Arch Otolaryngol Head Neck Surg. 1993;119...
...the implant.
These observations have led to the search for materials that demonstrate the same **biocompatibility** as silicone but confer better stability. Porous and meshed alloplastic materials were thus developed to ... It is interesting to note that Proplast, another form of polytef (with pyrolized carbon or **aluminum oxide**), elicits an intense and ongoing inflammatory cell reaction that does not subside but rather increases... tissue and bone prosthesis with a porous low modulus materials system. In: Williams DF, ed. **Biocompatibility** of Clinical Implant Materials. Tunbridge Wells, England: Sector Publishing Ltd; 1976;90:931.
9.
Merritt... bone softening in formic acid. The decalcified specimens were cut with a sharp No. 10 **scalpel** blade, thin sectioned using a microtome (LKB, Historange, Stockholm, Sweden), and stained using routine techniques...

10/3,K/6 (Item 6 from file: 442)
DIALOG(R)File 442:AMA Journals

00049785

Hydroxyapatite Cement: I. Basic Chemistry and Histologic Properties (Article)

... depending on the method of preparation. All forms of HA are noteworthy for their excellent **biocompatibility** . Hydroxyapatite does not cause a foreign body giant cell reaction, a sustained inflammatory response, toxic ...

... as a ceramic preparation. The ceramic forms of HA are heated to fuse individual HA **crystals** to each other through a process called sintering. After HA **crystals** are fabricated at a pH significantly lower than

physiologic, they are sintered (heated) to 600...

10/3,K/7 (Item 7 from file: 442)
DIALOG(R)File 442:AMA Journals

00034156

Refractive Keratoplasty in Monkeys Using Intracorneal Lenses of Various Refractive Indexes (LABORATORY SCIENCES)

MCCAREY, BERNARD E.; WARING, GEORGE O., III; STREET, DEBRA A.
Archives of Ophthalmology
January, 1987; 105: 123-1261987;
LINE COUNT: 00180 WORD COUNT: 02489

... 1-3) McCarey and Andrews (Ref. 4) attempted to circumvent the need for these complex **instruments** and **surgical** techniques by using high-water content hydrogel intracorneal lenses that would transmit nutrients to the ...SEE ORIGINAL SOURCE)

By the 13th postoperative month, the four corneas with PMMA implants developed **crystals** posterior to the implant, whereas only two of the four eyes with polysulfone implants developed **crystals** . It was not the intention of this investigation to present an analysis of the **crystals** ; this will be performed in a subsequent histochemistry investigation.

The preoperative to postoperative change in...
... changing the curvature of the cornea or altering its refractive index, and it must be **biocompatible** and unlikely to cause any toxic or metabolic damage to the cornea. To alter the...

10/3,K/8 (Item 1 from file: 95)
DIALOG(R)File 95:TEME-Technology & Management

01548073 20010903783
The fixation properties of carbon fiber-reinforced liquid crystalline **polymer implant in bone: an experimental study in rabbits**
Kettunen, J; Maekelae, A; Miettinen, H; Nevalainen, T; Pohjonen, T; Suokas, E; Rokkanen, P
Journal of Biomedical Materials Research, v56, n1, pp137-143, 2001
ISSN: 0021-9304

ABSTRACT:
...material with ultra-high strength and a low elastic modulus called carbon fiber-reinforced liquid **crystalline** polymer (LCP/CF) has been developed. The authors studied the fixation properties of an intramedullary ...

...CF rod in rabbit bone. The medullary canals of both femora were reamed with a **drill** 3.2 mm in diameter starting from the trochanteric fossa in eleven New Zealand White...
...DESCRIPTORS: FASTENING; COPOLYMERS; **BIOCOMPATIBLE** MATERIALS

10/3,K/9 (Item 2 from file: 95)
DIALOG(R)File 95:TEME-Technology & Management

01513330 20010502755
Electric resistance phenomena in porous Ni-Ti shape-memory alloys produced by SHS
Li, B-Y; Rong, L-J; Li, Y-Y
Scripta Materialia, v44, n5, pp823-827, 2001
ISSN: 1359-6462

ABSTRACT:
...promising applications in medical field (such as cranial-facial replacement and prosthesis, dental roots, and **medical instruments**) due to their good **biocompatibility** , unique shape-memory effect (SME) as well as superelasticity (SE), and good mechanical properties. It is well known that Ni-Ti SMAs show a **crystalline** transition from parent phase to martensite phase and vice versa when they are subjected to...

10/3,K/10 (Item 3 from file: 95)
DIALOG(R)File 95:TEME-Technology & Management

00968905 T96020276156
Glass fibres with improved biocompatibility
anonym
Medical Textiles, v19, nFeb, pp2, 1996
ISSN: 0266-2078

ABSTRACT:
...as follows: Glass fibres which are toxicologically harmless (have no carcinogenic potential), and show improved **biocompatibility** , have been developed by German researchers at Bayer AG. The fibres (US patent 5332698) typically...

...the following compounds in the proportions given in mol%: SiO2 58-65, B2O3 0-4, **Al2O3** 0-1, TiO2 0-3, iron oxides 0-1, MgO 1-4, CaO 12-20...
...fibres fell to half the original number in less than 115 days, while intraperitoneal installation **saw** the tumour rate after two years fall below 10 %. In fibres with proportions of TiO2, BaO, ZnO, SrO, and **ZrO2** of 1 mol% the half life was only 42 days and the tumour rate measured...
DESCRIPTORS: FIBREGLASS; PATENT MATTERS; CHEMICAL COMPOSITION; FIBER DIAMETER; CARCINOGENS; SOLUBILITY; BIODEGRADABILITY; **BIOCOMPATIBILITY** ; ANIMAL EXPERIMENTS

10/3,K/13 (Item 2 from file: 149)
DIALOG(R)File 149:TGG Health&Wellness DB(SM)

01934699 SUPPLIER NUMBER: 65170651 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Ureteric stents, far from ideal.(Commentary)
Tolley, David
The Lancet, 356, 9233, 872

Sept 9,2000
PUBLICATION FORMAT: Magazine/Journal; Refereed ISSN: 0099-5355

... and ureteric function and the effect of urine on the stent. These effects reflect the **biocompatibility** of the stent. Many physical properties of the stent material will affect both performance and...

...a high tensile strength and smooth surface, with low risk of being fouled with protein, **crystals** , and bacteria in the urine. Such fouling consists of deposition of these substances on the stent, with formation of biofilm and encrustation. **Biocompatibility** is a potential problem with many materials.(14) Polyethylene and C-flex (a co-polymer...
...as a means of drug delivery, but these agents are highly water soluble.
Because full **biocompatibility** has been hard to achieve with polymers, metal alloys have been explored as materials for...
PRODUCT/INDUSTRY NAMES: 3841110 (**Surgical Instruments**);
NAICS CODES: 339112 **Surgical** and **Medical Instrument** Manufacturing; 54171 Research and Development in the Physical, Engineering, and Life Sciences

10/3,K/14 (Item 3 from file: 149)
DIALOG(R)File 149:TGG Health&Wellness DB(SM)

01873459 SUPPLIER NUMBER: 58035928 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Nonabsorbable Versus Absorbable Suture Anchors for Open Bankart Repair.
Warme, Winston J.; Arciero, Robert A.; Savoie, Felix H. III; Uhorchak, John M.; Walton, Mark
The American Journal of Sports Medicine, 27, 6, 742
Nov,1999
PUBLICATION FORMAT: Magazine/Journal; Refereed ISSN: 0363-5465

... monomers.(18) However, concerns about the in vivo holding power of these devices and their **biocompatibility** persist.
Absorbable implants are thought to degrade in a continuum of five stages.(21) Initially...

...The kinetics of implant strength loss depends on the polymers' physical qualities (type, purity, and **crystallinity**) and the implant's surface area as well as the environment in which it resides...at 6 months, 1 year, and 2 years after surgery. The size of the anchor **drill** hole was measured on the radiographs with a micrometer so that by comparing sequential radiographs...

10/3,K/15 (Item 4 from file: 149)
DIALOG(R)File 149:TGG Health&Wellness DB(SM)

01755112 SUPPLIER NUMBER: 20331169 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Biodegradable interference screw fixation exhibits pull-out force and stiffness similar to titanium screws.
Weiler, Andreas; Windhagen, Henning J.; Raschke, Michael J.; Laumeyer, Andrea; Hoffmann, Reinhard F.G.
The American Journal of Sports Medicine, v26, n1, p119(10)
Jan-Feb,1998

PUBLICATION FORMAT: Magazine/Journal; Refereed ISSN: 0363-5465

...the healing stage of reconstruction.
A potential problem associated with interference screw degradation is compromised **biocompatibility** , even though few complications occur in their clinical use." This issue is still controversial because of reports of severe foreign body reaction with the use of fast-degrading, highly **crystalline** PGA implants.(5,11,24,59) However, even slow-degrading Poly-(L-lactide) implants may provoke late tissue reactions in the final stages of degradation because of the material's **crystallinity**0 .(4,17,35,36,45) Synovial reactions to biodegradable implants after intraarticular use are sometimes...

10/3,K/16 (Item 5 from file: 149)
DIALOG(R)File 149:TGG Health&Wellness DB(SM)

01370144 SUPPLIER NUMBER: 12689232 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Surgical correction of nearsightedness. (review article)(Education & Debate)
Bechara, Samir J.; Thompson, Keith P.; Waring, George O., III
British Medical Journal, v305, n6857, p813(5)
Oct 3,1992
PUBLICATION FORMAT: Magazine/Journal ISSN: 0959-8146 LANGUAGE: English

... for a successful intracorneal lens. Hydrogel intracorneal lenses were developed in 1981 and showed good **biocompatibility** and reasonable predictability in animals.[35] Clinical trials controlled by the Food and Drug Administration...

...highly experimental.
RADIAL KERATOTOMY
In radial keratotomy the cornea is partially incised with a diamond **scalpel** to flatten it and reduce its refractive power (fig 6). It is the oldest refractive...lens implantation is a type of refractive surgery that involves not the cornea but the **crystalline** lens. It occurs in two contexts, after cataract surgery and with the implantation of lenses...

10/3,K/17 (Item 6 from file: 149)
DIALOG(R)File 149:TGG Health&Wellness DB(SM)

01292274 SUPPLIER NUMBER: 10333303 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Made in the USSR: new Soviet medical technology now coming to the United States. (radiolucent composite plastic used for biocompatible **orthopedic polymers)**
Sandlin, Nina
American Medical News, v34, n3, p14(2)
Jan 21,1991
PUBLICATION FORMAT: Magazine/Journal ISSN: 0001-1843 LANGUAGE: English

... of improved superpower relations is a resorbable, radiolucent composite plastic known as BOP.
Short for **biocompatible** orthopedic polymer, BOP is a Soviet-developed synthetic bone now being refined for the U...

...of the coating process, now also used to improve the wear-resistance of prostheses and **surgical instruments** .

One attraction of Soviet science is its vastness: The Soviet research establishment is the world...that are both technically sound and a good match for U.S. industry. A sapphire **scalpel** , made from huge **crystals** with very long life for the edge, proved of little interest to suppliers oriented to...

10/3,K/18 (Item 7 from file: 149)
DIALOG(R)File 149:TGG Health&Wellness DB(SM)

01233065 SUPPLIER NUMBER: 08287132 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Plastics in medicine: the performance of your life, says Society of the Plastics Industry.
PR Newswire, 0329DC002
March 29,1990
PUBLICATION FORMAT: Newswire LANGUAGE: English RECORD TYPE: Fulltext

... plastics.

Improved Care

Unlike other materials, plastics can be designed to accommodate specific needs. Transparent, **bioinert** , shatter and heat resistant, rigid or elastic, plastics meet countless requirements of today's medical...

...damage during delicate arthroscopic surgery. Professional baseball players such as John Candelaria and Kurt McCaskill **saw** speedy recoveries following their "plastic surgery."

-- Plastic also is used in a disposable surgical stapler...
...bags required for cardiac surgery, plastics provide strength, clarity and safety.

Plastics also serve as **biocompatible** implants:

-- Plastic fiber mesh helps restore the skin of burn victims and now is use...

10/3,K/19 (Item 8 from file: 149)
DIALOG(R)File 149:TGG Health&Wellness DB(SM)

01069724 SUPPLIER NUMBER: 03102460 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Amphiphilic secondary structure: design of peptide hormones.
Kaiser, E.T.; Kezdy, F.J.
Science, v223, p249(7)
Jan 20,1984
PUBLICATION FORMAT: Magazine/Journal ISSN: 0036-8075 LANGUAGE: English

... biologically active peptide is dictated not only by structural considerations but also by considerations of **biocompatiblity** , degradability, specificity, and lack of induction of immunoreaction. Thus, the naturally occurring peptide might be...vesicles and other amphiphilic surfaces. When a model of apo A-I was constructed we **saw** that the helices could be placed on the surface of an HDL particle in such...not compact and would be a metastable structure under the conditions where most x-ray **crystal** structure determinations are performed. Nevertheless, examination

of molecular models of various peptide hormones leads us...

10/3,K/20 (Item 1 from file: 369)
DIALOG(R)File 369:New Scientist

00110318 15120473.400 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Millionaires' row
MOTLUK, ALISON
New Scientist, vol. 151, no. 2047, p. 28
September 14, 1996

TEXT:
...called the Alcolyser. It is a simple device: a small tube containing yellow potassium dichromate **crystals** and a bag to collect a set volume of breath. Boozy breath turns the **crystals** green. The two men were on the road to a fortune.

At first, they could...of a material that allowed blood to flow without clotting led him to set up **Biocompatibles** , a company now worth Pounds Sterling 230 million. Chapman was a professor of biophysical chemistry...it took two more years to negotiate a favourable deal. In 1986, Chapman set up **Biocompatibles** in the science park of London's Brunel University. "The company developed new patents of...
...idea," says Chapman, who is now 69. His polymers are used these days to coat **medical instruments** , such as guidewires for angioplasty operations. Coated cardiovascular stents are currently being tested.

The substance...

...with Pounds Sterling 3.1 million in sales last year, is highly profitable as well. **Biocompatibles** went public last year and Chapman admits modestly that he holds a "reasonable" block of...in his early twenties. While studying how computer systems work and designing his own, Wolfram **saw** how much time was lost in assembling software. "There were all these specialised packages, but...

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Set     Items   Description
S1      45920   (THREAD(2N)CUT???? OR CENTERING OR MEDICAL? OR SURGERY OR -
             SURGICAL?)(2N)(INSTRUMENT? OR TOOL? ?) OR SCALPEL? ? OR SAW OR
              SAWS OR DRILL? ?
S2        116   BIOINERT? OR BIO()INERT?
S3       7148   BIOCOMPATIB? OR BIO()COMPATIB?
S4     142533   BIOINERT? OR BIO()INERT? OR (ALUMINUM OR ZIRCONIUM OR CHRO-
             MIUM)(2N)OXIDE? ? OR SILICON()NITRIDE OR YTZP OR ZTPA OR Y()T-
             ZP OR CRYSTAL? OR NON()(FERROUS OR FERRIC?) OR NONFERROUS OR -
             NONFERRIC OR BIOLOX OR ZIOLOX
S5      21575   ZICONIA OR ZRO2 OR AL2O3 OR CR2O3 OR SI3N4
S6     154137   S4 OR S5
S7         22   S1 AND (S2 OR S6) AND S3
S8         22   S7 NOT PY>2002
S9         22   S8 NOT PD>20020328
S10        20   RD (unique items)
? show files
File 441:ESPICOM Pharm&Med DEVICE NEWS 2003/Jun W3
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File 442:AMA  Journals 1982-2003/Dec B1
         (c)2003 Amer Med Assn -FARS/DARS apply
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         (c) 2003 Mass. Med. Soc.
File  95:TEME-Technology & Management 1989-2003/Jun W1
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         (c) 2003 The HW Wilson Co.
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File 149:TGG Health&Wellness DB(SM) 1976-2003/Jun W2
         (c) 2003 The Gale Group
File 369:New Scientist 1994-2003/Jun W2
         (c) 2003 Reed Business Information Ltd.
File 370:Science 1996-1999/Jul W3
         (c) 1999 AAAS
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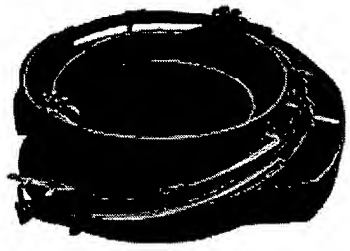
industry

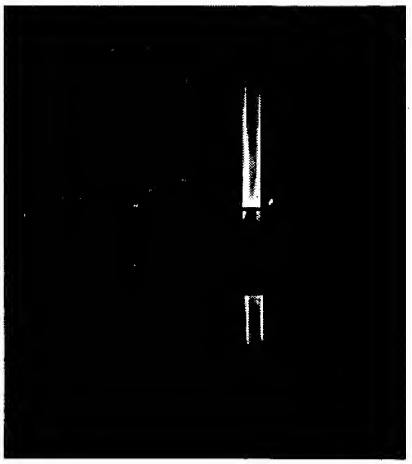
Spotlight on Surface Treatment



Thermal spray coatings

Pictured is a stainless-steel vibratory feeder bowl coated with a self-lubricating thermal spray coating for protection against wear and contamination. Tough, flexible Plasmadize coatings are a true composite of the latest developments in metals, ceramics, polymers, and/or dry lubricants. These materials are combined to produce a new material with an extremely low coefficient of friction and other unique properties. They create a nonporous, nonstick, corrosion-resistant surface but can also be formulated to produce a gripping or nonslip surface. **General Magnaplate,** 1331 Rte. 1, Linden, NJ 07036. Ph: 908/862-6200.

Surface modification

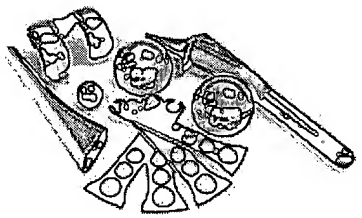


Surface modification using PhotoLink technology provides a variety of surface properties for a wide range of materials. Achievable surface characteristics include improved lubricity, hemocompatibility, infection resistance, wettability, drug delivery, tissue engineering, and functional surfaces for biomolecule immobilization. Each PhotoLink reagent can modify a product's surface with simple and environmentally sensitive processing steps. **SurModics Inc.,** 9924 W. 74th St., Eden Prairie, MN 55344. Ph: 612/829-2700.

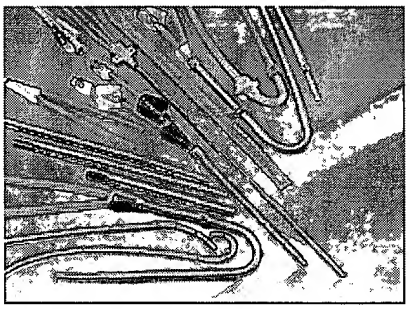
Electrical surface treatment

Production equipment for surface treatment of syringe hubs improves adhesion using electrical surface treatment (EST) technology. The equipment increases the surface energy of the inside surfaces of the syringe hub and greatly increases the pull strength of the needle and hub. EST technology uses electrical discharge to surface treat polymers. The treatment is done at atmospheric pressure and can be easily integrated into production lines. **Tantec Inc.,** 630 Estes Ave., Schaumburg, IL 60193. Ph: 847/524-5506.

Diamondlike coatings



A process has been developed for depositing diamondlike coatings (DLC) on the surface of virtually any substrate capable of withstanding heat up to 200° C. This enables metals, carbides, ceramics, and even high-temperature plastics with a continuous 5-µm-thick monofilm with the properties of diamond. The substrate's surface characteristics are accurately reproduced and in most cases do not exceed the component's dimensional tolerance. The diamond film deposits uniformly on the substrate regardless of its shape or geometry. The resulting DLC is much harder than tungsten carbide and has an ultralow coefficient of friction, improved electrical conductivity, and good adhesion to the coated substrate. **Surface Conversion Technologies Inc.,** 6160 Wellington Ct., Cumming, GA 30130. Ph: 404/889-6240.

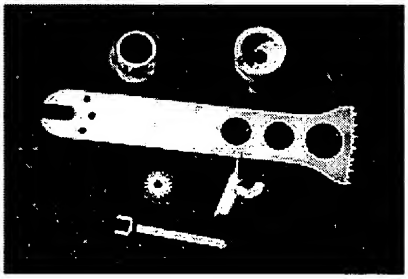


Infection-resistant coating

An "actively sterile" infection-resistant coating for medical device components can be applied to the surfaces of metal, polymer, or ceramic devices. The deposition process, known as ion beam-assisted deposition, combines metal evaporation with state-of-the-art ion beam technologies. The result is a permanent, adherent thin film that is effective against a variety of nosocomial bacteria including gram-positive and gram-negative strains as well as fecal and fungal agents. In addition to being infection resistant, the minimally leaching SPI-Argent coating provides a slick surface that prevents biodeposit and thrombosis attachment while reducing mucosal irritation. **Spire Corp.,** One Patriots Park, Bedford, MA 01730. Ph: 617/275-6000.

Parylene coating

Custom parylene coating services are available to medical device manufacturers. Complete process engineering, precoat cleaning and masking, parylene vacuum deposition, and final inspection are all offered. The result is a thin, biocompatible, bioinert coating that resists chemicals, body fluids, electrolytes, proteins, enzymes, and lipids. Applications include esophageal and vascular stents, heart pacers, catheters, endoscopic components, circuit boards, needles, and other components. **Specialty Coating Services Inc.,** 5707 W. Minnesota St., Indianapolis, IN 46241. Ph: 800/356-8260.



Chrome plating

Chrome plating may extend the wear life of medical devices up to 1000 times while also providing a harder, more lubricious surface. Applications include surgical and biopsy needles, tools for orthoscopic surgery, screws and pins for bones, surgical cutters, and machined parts, including cams, shafts, and pistons. A proprietary high-chromium coating that is thin, dense, hard, and nonmagnetic can be applied to all ferrous and most nonferrous metals. **Electrolizing Inc.,** 1947 Hooper Ave., Los Angeles, CA 90036. Ph: 213/749-7876.

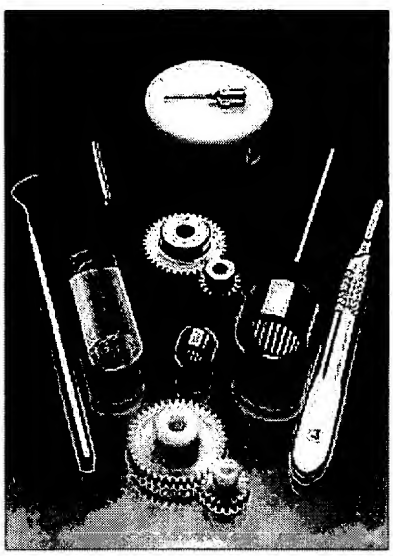
Lubricious coating

A specialized lubricious coating has been formulated to adhere to metallic surfaces. LubriLast-B hydrogel coats flexible wires and springs without stiffening the wire or bridging the coils. Unlike lubricants such as silicone fluid, the coating is imperceptible when dry but becomes very slippery once in contact with body fluids. This property reduces patient trauma by facilitating insertion while maximizing physician control of the device. **Advanced Surface Technology Inc.,** 9 Linnell Cir., Billerica, MA 01821. Ph: 508/663-7652.

Gas plasma systems

Advanced gas plasma systems for

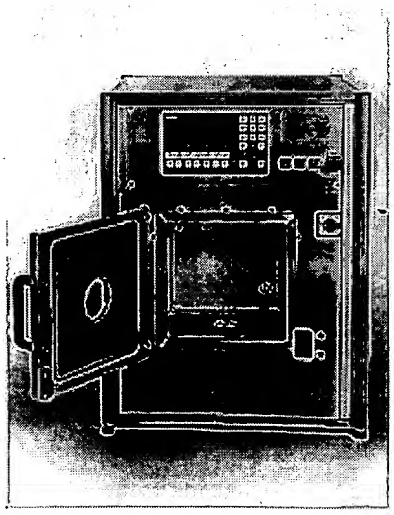
surface treatment of small, molded medical parts incorporate rotating baskets that ensure that all parts receive equal exposure to the plasma, guaranteeing uniformity from part to part and batch to batch. Standard systems are offered with basket capacities of 1 and 4 cu ft. The manufacturer provides complete plasma system support, including equipment, process development, and contract treatment services. **4th State Inc.,** 1260 Elmer St., Belmont, CA 94002. Ph: 415/596-1600.



Thin-film surface coatings

A technological advance in thin-film surface coatings allows the low-temperature deposition of pure polytetrafluoroethylene. These molecularly bonded coatings offer controllable thickness down to submicron levels. The result is a thin-film surface coating with good adhesion, electrical, and mechanical properties. It can be applied to most materials without the need for a high-temperature cure. The coatings can be applied with no overspray or high buildup in tight dimensions. Suggested uses include release coatings, barrier coatings, friction coatings, and device coatings. **Advanced Surface Engineering Inc.,** 5320 Enterprise St., Ste. L, Eldersburg, MD 21784. Ph: 410/552-0376.

Microwave plasma system

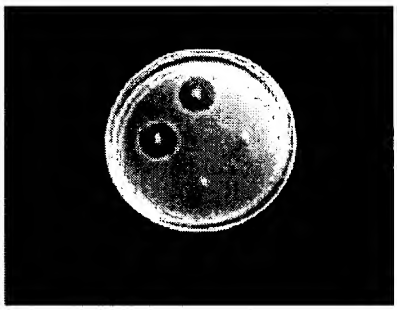


A low-pressure microwave plasma system provides ultrapure cleaning of metals, glass, ceramics, and optics, as well as polymer surface modification and plasma polymerization. The Model V15-G is designed for R&D and small-device production. It features a 2.45-GHz microwave frequency, an electrode-free aluminum process chamber, a mass-flow controller, microprocessor control with stored recipe capability, a graphic display for visual monitoring of process parameters, and an electronic plasma sensor. **PLASMAtech Inc.,** 1830 Airport Exchange Blvd., Ste. 120, Erlanger, KY 41018. Ph: 606/647-0730.

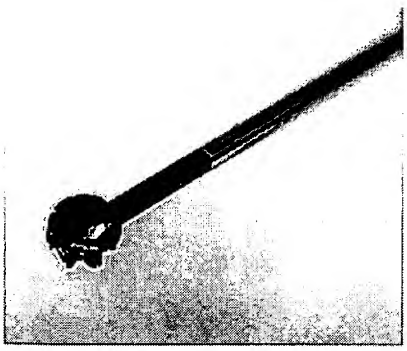
Electropolishing

Electropolishing is a stress-free electrochemical process that, by removing surface impurities in metal, improves the fatigue life of springs, stampings, and other manufactured parts. The process removes the high points on stainless steel and redeposits a clear, chemically bonded oxide layer. This layer retards corrosion and resists impregnation by bacteria. The absence of scratches, strains, metal debris, and embedded abrasives characterizes the electropolished surface. **New England Electropolishing Company, Inc.,** P.O. Box 845, Fall River, MA 02722. Ph: 800/672-6616.

Hydrophilic coatings



Catheter-associated infections are a leading cause of hospital-acquired illnesses. According to the results of a company's in vitro study, its Medi-Coat hydrophilic coatings, which contain silver compounds, may significantly reduce such catheter-related infections. Greater aqueous diffusion in the hydrogel coatings produces a greater silver ion concentration at and just above the device surface. Antimicrobial agents are entrapped in the coatings, and the hydrophilic property of the coating allows drug molecules to dissolve in water and diffuse out of the polymer matrix. This provides an antimicrobial environment near the surface of the catheter, preventing adhesion and propagation of bacteria. **STS Biopolymers,** 336 Summit Point Dr., Henrietta, NY 14467. Ph: 716/321-1130.



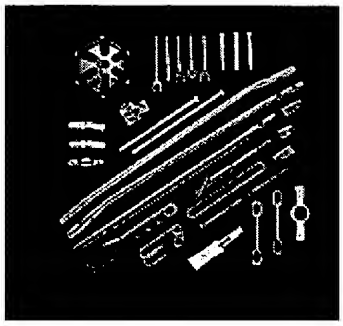
Diamond coating

A wear-resistant amorphous carbon coating offers corrosion resistance, hardness approaching that of natural diamond, and good adherence to stainless steel, titanium, and Co-Cr alloys. TetraBond, which is primarily sp3-bonded carbon, has good biocompatibility and a pleasing black

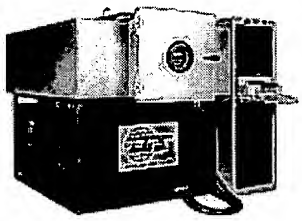
color. The manufacturer's performance tests show that it reduces cutting forces and temperature on sharp-edged drills, burrs, and blades while extending instrument life. The coating is also being evaluated for use on orthopedic and cardiovascular implants. **Multi-Arc Inc.,** 200 Roundhill Dr., Rockaway, NJ 07866. Ph: 973/625-3400.

Return to the *MPMN* home page

Metal surfacing



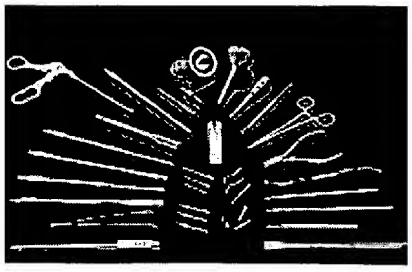
A company offers complete metal-finishing services including polishing, graining, blasting, and anodizing for both aluminum and titanium products. Marking capabilities include laser, silk screen, and deep imaging techniques. With its Steri-Color method, the company recently completed a qualification process for fade-resistant-color aluminum anodizing that is compatible with Sterrad sterilization methodology. The company also has an electropolishing facility for stainless steel. **Danco Metal Surfacing,** 44 La Porte St., Arcadia, CA 91006. Ph: 818/445-3303.



Gas plasma treatment

Gas plasma technology is used to modify a variety of materials and surfaces. The process can achieve several results: transform surfaces to be hydrophobic, hydrophilic, or lubricious; increase bond strength; improve wettability; ultraclean; etch; and deposit coatings. A few of the products currently treated with the gas plasma are catheters, guidewires, intraocular lenses, syringe hubs, sensors, and filters. The process is environmentally sensitive, yields uniform results, and is reproducible. **Advanced Plasma Systems Inc.,** 12000 28th St. N., St. Petersburg, FL 33716. Ph: 813/573-4567.

Titanium nitride coating



Titanium nitride (TiN) coating is a molecular bond of TiN to properly prepared metal surfaces. It provides surface hardness and lubricity to reduce friction and improve wear. TiN is FDA compliant and gold colored, and it provides an extremely hard surface

(85 Rc) at 0.0001 in. thick. Galling of mating stainless-steel components is eliminated. The coating can be repeatedly autoclaved or otherwise sterilized, and it provides wear resistance, corrosion resistance, improved release from tissue, and less glare than uncoated instruments. **BryCoat Inc.,** 976 4th St. N., Safety Harbor, FL 34695. Ph: 800/989-8788.

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MDL:Medical Product Manufacturing News:Archive:November 1997: ...

... The result is a thin, **biocompatible**, **bioinert** coating that resists chemicals, body fluids ... sharp-edged drills, burrs, and blades while extending **instrument** life. ...
www.devicelink.com/mpmn/archive/97/11/spotlight.html - 31k - Cached - Similar pages

eMedicine - Middle Ear, Ossiculoplasty : Article by Robert A ...

... attachment that occurs with **bioinert** and **biocompatible** ... reconstruction should be **biocompatible**, stable, safe ... the cartilage with one **instrument** while draping the ...
www.emedicine.com/ENT/topic219.htm - 101k - Cached - Similar pages

The Scientist - HPLC Applications Large & Small - It Isn't One ...

... in single-column mode, the **instrument** is easier ... A 100% **biocompatible** PEEK flow path ensures that there ... Nouveau systems have optional **bioinert** (PEEK) flow paths ...
www.the-scientist.com/yr1997/sept/profile2_970915.html - 44k - Cached - Similar pages

Manufacturers and suppliers of electrophoresis products and ...

... and the embedding of **biocompatible** electrodes in ... The construction makes the **instrument** especially well ... HPLC Systems (analytical, **bioinert**, drug discovery and ...
www.chromatograph.ru/manufacturers-suppliers/ electrophoresis-instrumentation.htm - 48k - Cached - Similar pages

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... at different temperatures on a VCA 2500 optima **instrument** (AST) in ... the design of biointegrable porous composite scaffolds, made of **biocompatible** and relatively ...
www.metsoc.org/conferences/com2002/ pdfs_word/biomedical.pdf - Similar pages

ICAM2000 Abstracts

... improvements in the operation of the **instrument** to measure ... only by the development of **biocompatible** materials. ... options, bond coats based on **bioinert** titania or ...
www.bgr.de/icam2000/abstracts.htm - 101k - Cached - Similar pages

[PDF]PII: S0927-796X(02)00004-9

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... biocompatibility, achieve bioactive or **bioinert** performance, enhance ... fabricated in the same **instrument** without breaking ... coatings as well as **biocompatible** films ...
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... continued on the development of **biocompatible** surfaces using ... to attach bioactive and/or **bioinert** modifiers to ... An **instrument** with the capability of performing ...
www.mmo.on.ca/scripts/asp/members_area/ pdfs/Compendium_Volume1_October_98.pdf - Similar pages

[PDF]Hubbell, JA and LV Mcintire (1986). "Platelet Active ...

File Format: PDF/Adobe Acrobat - View as HTML
... The **instrument** was capable of very sensitive continuous semi- quantitative measurements of ... MPEG on the surface were seen to be much more **biocompatible** than the ...

www.biomed.mat.ethz.ch/html/ images/Hubbell%20Biblio.pdf - Similar pages

CLJan01
... plug of autogenous bone between the **instrument** and the ... PerioGlas is **biocompatible**, but is not osteoconductive ... activities of biotolerant, **bioinert**, and bioactive ...
nnd40.med.navy.mil/navyperio/cljan01.htm - 69k - Cached - Similar pages

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9/5/1 (Item 1 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00748341 **Image available**
MEDICAL INSTRUMENTS
INSTRUMENTS CHIRURGICAUX
MEDIZINISCHE INSTRUMENTE
Patent Applicant/Assignee:
CERAMTEC AG, Innovative Ceramic Engineering, Fabrikstrasse 23 - 29, D-73207 Plochingen, DE, DE (Residence), DE (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
FRANKE Ralf-Peter , Rosenackerweg 14, D-89160 Dornstadt, DE, DE (Residence), DE (Nationality), (Designated only for: US)
FRIPAN Michael , Sudstrasse 19, D-71522 Backnang, DE, DE (Residence), DE (Nationality), (Designated only for: US)
BURGER Wolfgang , Muhlhaldenweg 75, D-73207 Plochingen, DE, DE (Residence), DE (Nationality), (Designated only for: US)
RICHTER Herbert , Schlehenweg 14, D-73257 Kongen, DE, DE (Residence), DE (Nationality), (Designated only for: US
Legal Representative:
UPPENA Franz, Dynamit Nobel Aktiengesellschaft, Patentabteilung, D-53839 Troisdorf, DE
Patent and Priority Information (Country, Number, Date):
Patent: WO 200061517 A1 20001019 (WO 0061517)
Application: WO 2000EP3240 20000411 (PCT/WO EP0003240)
Priority Application: DE 19916149 19990411
Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: C04B-035/01
International Patent Class: A61B-017/16; A61B-017/32
Publication Language: German
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the Patent

English Abstract
The present invention relates to the use of biocompatible and **bioinert** materials for producing medical/surgical instruments. The invention also relates to medical/surgical instruments made of biocompatible and **bioinert** materials. The invention further relates to tools made of biocompatible and **bioinert** materials for the use as medical/surgical instruments. The invention also relates to the use of tools made of biocompatible and **bioinert** materials in surgery.

Legal Status (Type, Date, Text)
Publication 20001019 A1 With international search report.
Publication 20001019 A1 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.
Examination 20001207 Request for preliminary examination prior to end of 19th month from priority date

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Set     Items   Description
S1        119   E3,E12
S2          7   AU='FRANKE RALF PETER':AU='FRANKE RALF-PETER'
S3         16   AU='FRIPAN M':AU='FRIPAN MICHAEL DR'
S4        124   AU='BURGER W'
S5         44   AU='BURGER WOLF':AU='BURGER WOLFGANG DR DIPL CHEM'
S6        721   AU='RICHTER H'
S7         26   AU='RICHTER HERBERT'
S8       1040   S1:S7
S9          1   S8 AND BIOINERT?
? show files
File 347:JAPIO Oct 1976-2003/Feb(Updated 030603)
         (c) 2003 JPO & JAPIO
File 348:EUROPEAN PATENTS 1978-2003/Jun W01
         (c) 2003 European Patent Office
File 349:PCT FULLTEXT 1979-2002/UB=20030612,UT=20030605
         (c) 2003 WIPO/Univentio
File 350:Derwent WPIX 1963-2003/UD,UM &UP=200338
         (c) 2003  Thomson Derwent
File 371:French Patents 1961-2002/BOPI 200209
         (c) 2002 INPI.  All rts. reserv.
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Inventor search in med files

34/5/2 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE

11516006 EMBASE No: 2002087568
In vitro biocompatibility **testing of orthopaedic implants. A critical review of literature. Part II: Polymers**
BIOKOMPATIBILITATSTESTUNG ORTHOPADISCHER WERKSTOFFE IN VITRO. EINE KRITISCHE LITERATURUBERSICHT. TEIL II: POLYMERE
Wilke A.; Jager M.; Traub F.; Wanner F.; **Franke R.P.**
Osteologie (OSTEOLOGIE) (Germany) 2001, 10/4 (224-249)
CODEN: OSTEF ISSN: 1019-1291
LANGUAGE: GERMAN SUMMARY LANGUAGE: ENGLISH; GERMAN

In a number of different medical disciplines polymers do have a huge distribution with growing tendency during the last decades. This literature study gives an overview to the most important polymers, which are in daily clinical use. The in vitro culture systems results are summarised by tables in a chronological order.

DEVICE BRAND NAME/MANUFACTURER NAME: silastic/Dow; MDX 4-4210/Dow; Stomil/cracow; 3145 RTV/Dow; Q7-2424/Dow; Dacron/Meadox; Melinex/ICI; Dacron/Vascutek/United Kingdom; sg 096/university of texas; P-1700/Union Carbide; Gc-1006/wilson fiberfill; EA 1993-57/Dow; Estane/Goodrich; Mitrathane/Matrix; Pellethane/Upjohn; Vascugraft/Braun Melsungen; Teflon/DuPont; Gore-Tex/Gore/United States; Teflon/dotmar/Australia; Sulfix-6/Sulzer; Acycon/Mitsubishi; Sevriton/De Trey; Biomer; DegraPol; Palacos; Surgical Simplex; CMW-Bone-Zement; Palavit; CMW3; Surigcal Simplex P; Palacos R; Osteopal HA
DEVICE MANUFACTURER NAMES: Dow; Rusch; Wacker Chemie; cracow; mercor; Mitsubishi/Japan; Meadox; ICI; Teijin; Vascutek/United Kingdom; Thermanox; Zimmer; Polmedic; Abiomed; Portex/United Kingdom; university of texas; tygon northon/United States; sumitomo bakelite; polyplast; veb keradenta; Gambro/Japan; sydplast schweden; Colorite/United States; Union Carbide; wilson fiberfill; molded products; Fisher; Bard; Rubber/Sweden; Uniroyal; Goodrich; Matrix; Upjohn; Braun Melsungen; DuPont; Gore/United States; dotmar/Australia; Impra; Sulzer; Caulk; De Trey
DRUG DESCRIPTORS:
*polymer silicon; polypropylene; silastic; **silicon nitride** ; polyethylene terephthalate; polyethylene; dacron; polyvinylchloride; polysulfone; latex; polyetherurethan; politef; poly(methyl methacrylate); unclassified drug
MEDICAL DESCRIPTORS:
* **biocompatibility** ; *bone prosthesis
in vitro study; cell culture; biomedical technology assessment; medical research; methodology; implant; article
DRUG TERMS (UNCONTROLLED): polyester polyurethan
CAS REGISTRY NO.: 7440-21-3 (silicon); 25085-53-4, 9003-07-0 (polypropylene); 63394-02-5 (silastic); 12033-89-5 (**silicon nitride**); 25038-59-9, 9003-68-3 (polyethylene terephthalate); 9002-88-4 (polyethylene); 60527-88-0 (dacron); 9002-86-2 (polyvinylchloride); 25135-51-7 (polysulfone); 76600-67-4 (polyetherurethan); 9002-84-0, 9039-02-5 (politef); 39320-98-4, 9008-29-1 (poly(methyl methacrylate

34/5/3 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

11719676 99156155 PMID: 10048410
In vitro evaluation of the mutagenic and carcinogenic power of high purity zirconia ceramic.
Covacci V; Bruzzese N; Maccauro G; Andreassi C; Ricci G A; Piconi C; Marmo E; **Burger W** ; Cittadini A
Biomaterials (ENGLAND) Feb 1999, 20 (4) p371-6, ISSN 0142-9612 Journal Code: 8100316
Tetragonal zirconia polycrystal (TZP) is a new interesting ceramic for the manufacture of medical devices. Its wide use in orthopedic and odontoiatric implants was limited till now by the high chemical and radiochemical impurities of the raw materials. Purification processes now available allow to obtain high purity ceramic grade powders suitable for TZP ceramics manufacture, even if their possible mutagenic and transforming effects are still unclear. The aim of this work is to study in vitro the mutagenic and oncogenic effects of a new zirconia ceramic stabilized by yttria (**Y - TZP**). This ceramic was sintered from high purity powders obtained by a process developed under a project carried out within the Brite EuRam programme. For comparison, ceramics made from unpurified zirconia powder were also tested. Fibroblasts irradiated by a linear accelerator were used as positive control. The results obtained show that **Y - TZP** ceramic does not elicit either mutagenic or transforming effect on C3H/10T(1/2) (10T(1/2)) cells and demonstrate that ceramic from high purity powders can be considered suitable for biomedical applications from the point of view of the effects of its radioactive impurity content.
Tags: Animal; Support, Non-U.S. Gov't
Descriptors: **Biocompatible** Materials--toxicity--TO; *Carcinogens --toxicity--TO; *Cell Transformation, Neoplastic--drug effects--DE; *Ceramics--toxicity--TO; *Mutagens--toxicity--TO; *Zirconium--toxicity--TO ; Cell Adhesion--drug effects--DE; Cell Adhesion--physiology--PH; Cell Division--drug effects--DE; Cell Division--physiology--PH; Cell Line; Dental Materials--toxicity--TO; Embryo--cytology--CY; Mice; Mutagenicity Tests
CAS Registry No.: 0 (Biocompatible Materials); 0 (Carcinogens); 0 (Ceramics); 0 (Dental Materials); 0 (Mutagens); 1314-23-4 (zirconium oxide); 7440-67-7 (Zirconium)
Record Date Created: 19990504
Record Date Completed: 19990504

34/5/4 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

11576772 99008655 PMID: 9794524
Y - TZP **ceramics for artificial joint replacements.**
Piconi C; **Burger W** ; **Richter H G** ; Cittadini A; Maccauro G; Covacci V; Bruzzese N; Ricci G A; Marmo E
Biomaterials (ENGLAND) Aug 1998, 19 (16) p1489-94, ISSN 0142-9612 Journal Code: 8100316
Due to their excellent mechanical properties, Yttria-stabilized Tetragonal Zirconia Polycrystal ceramics (**Y - TZP**) are used in ball heads for Total Hip Replacements. It is known that **Y - TZP** materials may show strength degradation due to ageing or to hydrothermal treatment. Also high

wear of UHMWPE sockets coupled to steam sterilized **Y - TZP** ball heads after a short implantation period was recently reported. This effect may be related to ball head surface phase transformation, due to corrosive attack. The aim of this study is the evaluation of **Y - TZP** ceramics stability. **Y - TZP** made out of Yttria coated powders were aged at 140 degrees C under 0.2 MPa water pressure, in Ringer's solution at 37 degrees C, in NZW rabbits. Samples made out Yttria coated powders show lower strength degradation than samples made out coprecipitated powders, and UHMWPE discs coupled to **Y - TZP** rings made out coated powders do not show increase in wear after repeated sterilization cycles of the ceramic rings.

Tags: Animal; Support, Non-U.S. Gov't

Descriptors: **Biocompatible** Materials; *Ceramics; *Joint Prosthesis; *Yttrium; *Zirconium; Chemistry, Physical; Implants, Experimental; Prostheses and Implants; Rabbits; Time Factors

CAS Registry No.: 0 (Biocompatible Materials); 0 (Ceramics); 1314-23-4 (zirconium oxide); 1314-36-9 (yttria); 7440-65-5 (Yttrium); 7440-67-7 (Zirconium)

Record Date Created: 19981230

Record Date Completed: 19981230

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              SAWS OR DRILL? ?
S2        652   BIOINERT? OR BIO()INERT?
S3      68232   BIOCOMPATIB? OR BIO()COMPATIB?
S4    3295183   BIOINERT? OR BIO()INERT? OR (ALUMINUM OR ZIRCONIUM OR CHRO-
             MIUM)(2N)OXIDE? ? OR SILICON()NITRIDE OR YTZP OR ZTPA OR Y()T-
             ZP OR CRYSTAL? OR NON()(FERROUS OR FERRIC?) OR NONFERROUS OR -
             NONFERRIC OR BIOLOX OR ZIOLOX
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S17       294   AU='BURGER, W.':AU='BURGER, W. J. G.'
S18       253   AU='BURGER, W. P.':AU='BURGER, W.W.'
S19         6   AU='BURGER, WOLFGANG'
S20       346   E4,E12
S21        14   E16,E19
S22      2051   AU='RICHTER H':AU='RICHTER H G'
S23       314   AU='RICHTER H G F':AU='RICHTER H O'
S24       631   AU='RICHTER H P':AU='RICHTER H.-B.'
S25       289   AU='RICHTER H.-E.':AU='RICHTER H.G.F.'
S26         7   AU='RICHTER H.H.':AU='RICHTER H.I.'
S27       108   AU='RICHTER H.J.':AU='RICHTER H-C'
S28       149   AU='RICHTER H-E':AU='RICHTER H-W'
S29         3   AU='RICHTER HERBERT':AU='RICHTER HERBERT G'
S30         0   S12:S29 AND (BIOINERT? OR BIO()INERT?)
S31       321   S6 AND S12:S29
S32         7   S31 AND (BIOCOMPATIB? OR BIO()COMPATIB?)
S33         7   S32 NOT DT=PATENT
S34         4   RD (unique items)
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